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POSTAGE

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Hardware delivery in the UK costs between £5 - £10 (call for price) ***Minimum Order £5***

All items are sold subject to our normal terms and conditions and are subject to availability.
*Free Software is only offered on *Software* purchases. (Ask for it when ordering)
All titles have been tested on A1200 based Amiga's, call for compatibility of A500 etc.
When ordering please state product code, title and price. A catalogue is sent with all orders.
KS2/3 = Compatible with A500+/A600/A1200 etc oem = unboxed etc
Cheques and Postal Orders should be made payable to **EPIC Marketing.**
When paying by cheque add £3 for extra-speedy clearance. Add £1.50 for insured delivery.
Credit card orders are normally dispatched within 48 hours. E&OE. All prices include VAT.

Month in View

Ben Vost, el presidente del' *Amiga Format*, personally guides you through the issue (you don't need no steenking batches).



44

ART EFFECT 3
It's been a long time coming, but *Art Effect version 3* can really hold its own against heavyweight paint packages. Now if only they could do something about its stability...



Ben Vost
Editor

Don't ever buy a Macintosh. At least, don't ever buy a Mac and let someone else look after it. You'll lose your hard drive, you'll lose the contents of the issue so far and the only plus point is the fact that it's quite likely you'll eventually end up with your 604e-powered 7600 replaced by a nice, new G3. Maybe.

Due to these Mac problems, we had less time than usual to get our issue to you, but we like to think that it's stuck to the normal high standards, and we've even had time to introduce new ideas, such as this revamped Month in View page, the updated CD and our new Fax-Back service. This was inspired by one of our sister magazines while on an editorial conference where people were amazed that I handled more than 200 emails a day. The vast majority of these come from you, dear readers, and a great number of Future's computing magazines were very surprised that we had such devoted readers, but then they wouldn't understand, would they?

Anyway, we have a superb issue lined up for you this month, and although we didn't manage to get the Melody 1200 or the 75MHz '060 accelerator for the A1200 in time, hopefully my unexpected interview with Doug McLaughlin will help to counter the disappointment you must be feeling. Who's he? Well, if you're online and you don't use *STRICQ*, you're missing out. Yes, I hear you say, but who is he? He's the guy who wrote it, and it's an absolutely superb package, ideal for those of you who want to find friends online.

Look out for our next issue as well when we still hope to have those errant reviews from this month for you, along with a new tutorial and all the news from the chaps at Amiga Inc. regarding the two new operating systems and their plans for the year...

AFCD40
All change! New look CD, new look HTML, new look lots of things, really. Find out why *AFCD40* is the best Amiga CD ever made.



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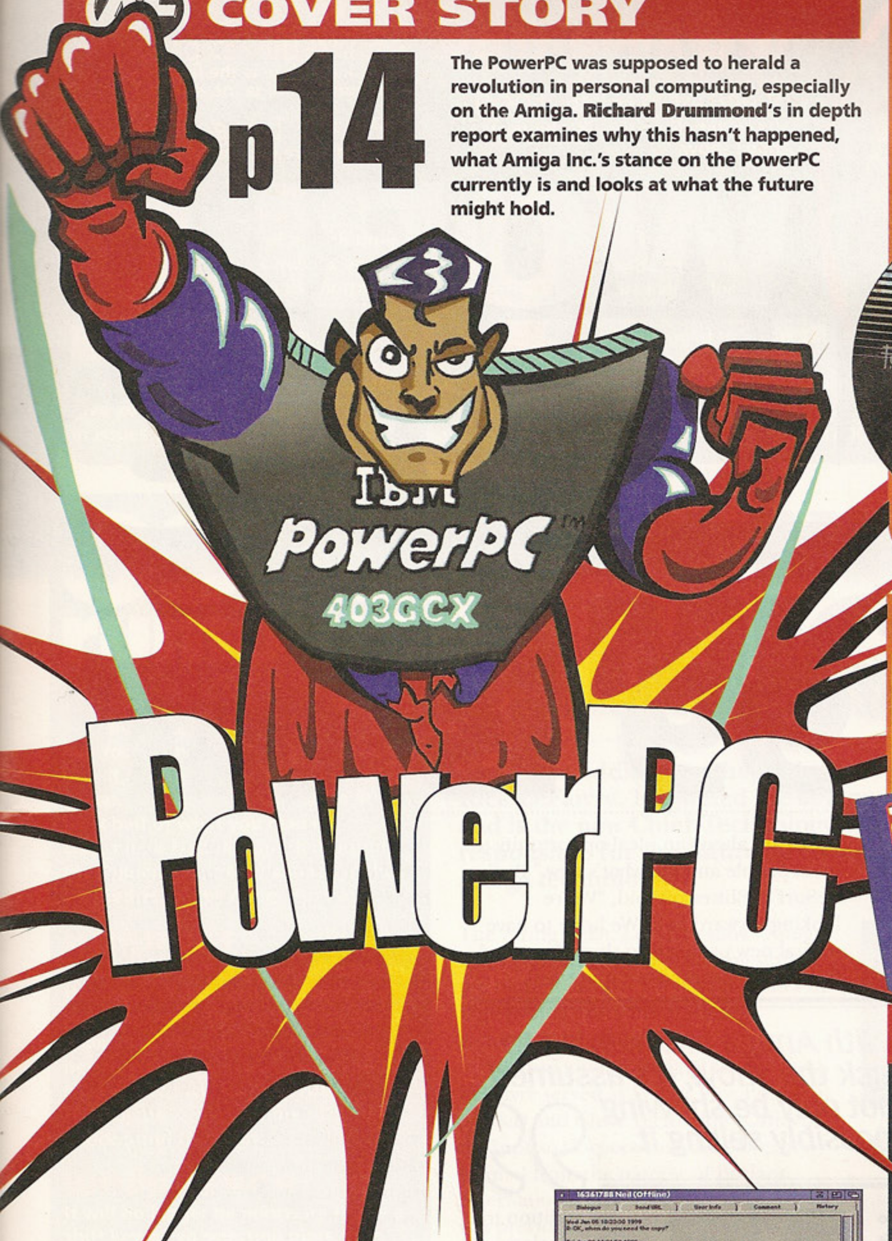
14

POWERPC
Richard Drummond delves into the murky depths of the PowerPC. Is it any good? Has it really got a future on the Amiga? Just wait and see, as our Rich reveals all.

AMIGA FORMAT Contents

ISSUE 124 JUNE 1999

COVER STORY



CD-ROMS

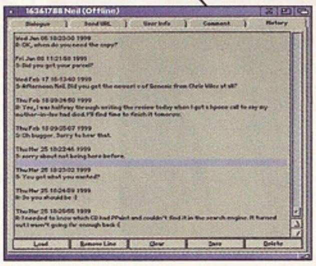


COVERDISKS





SCREENPLAY



Chatting on the net made easier, thanks to the *STRICQ* software.









Doom meets roleplaying games in the rather impressive *Hexen*.



All the latest games news can be found in our Previews section.







WHAT'S UP?

World of Amiga 1999
All the details on the UK's biggest Amiga show.

Amiga Inc. expansion
Dr. Rick LeFaivre is the latest new addition to Amiga Inc.'s staff.

PPC for ImageFX
New software expansions planned.

WORLD NEWS

The World of Amiga '99 is on!

Although there hasn't been much notice, it has been confirmed that WoA99 will now take place at the end of July at the Kensington Town Hall in London.

The venue is actually a little larger than the Novotel venue but it will be divided into three rooms. As yet it hasn't been confirmed who will attend, although with Amiga Inc. helping to back the show, it's assumed that they'll not only be showing OS3.5, but possibly even selling it too.

We also anticipate seeing early demos of OS5 and possibly some case designs from the new design company who Amiga Inc. have given the task of making the next generation Amiga look really cool.

Amiga dealers in the UK are excited about the show: "We'll definitely be attending," said Power boss Tony Ianiri. Eyetech's Alan Redhouse said, "We're delighted. These shows are always an ideal opportunity to meet people and see what's new." Paul LeSurf at Blittersoft said, "We're looking forward to it. We hope to have several new products to show there and the timing's worked out quite well."

> "With Amiga Inc. helping to back the show, it's assumed that they'll not only be showing OS3.5, but possibly selling it…"



Tony Ianiri is so pleased that there's a WoA this year he's wearing a special shirt to celebrate.

In addition to the UK dealers having stands, it's also expected that UK user groups will be attending under the aegis of the UK's UGN representatives, AmigaSoc. At the moment, the only confirmed attendees will be user groups from the South East like SEAL, ANT, Kickstart and so on, but it's expected that more will sign up to take part in the events of the weekend, which will hopefully include a cybercafé and a gaming network.

Amiga Format will, of course, be having a stand at the show and we may well have special things on display to celebrate our 10th birthday issue which will be on sale at the show.

WoA99 is being held at Kensington Town hall which is just across the road from High Street Kensington tube station. The new venue is much brighter than the Novotel and it also has two bars.

The dates are Saturday 24th and Sunday 25th of July. The doors open at 10am and the exhibition closes at 5pm on the Saturday and at 2pm on the Sunday. The cost of admission is £7.50 for adults and £5 for children.

This year the event is being put on by a combination of the efforts of P.B.A Events and AmigaSoc.

You can ring the ticket hotline on 01369 708004 for further details on the show and to order tickets.



Talking heads

What have the Amiga Format staff been doing this month?



Ben Vost
Editor
Bit of a slack time this month, apart from the horror of losing Mark's Mac. Having a well-deserved week off recharged my batteries to give you my best in this issue and in issues to come.



Richard Drummond
Staff Writer
Despite the long hours I work for *Amiga Format*, I still managed to find the time to add the finishing touches to the first act of the opera I'm writing, based on the life of Eric the Red.



Mark Wheatley
Prod. Editor
It wasn't my fault! So my Mac blew up and lost half the issue – I never touched it though! Oh well, apart from that it's been a month of dominoes, new Kit Kats and squirrel luring.



Colin Nightingale
Art Editor
Spend, spend, spend for me as those final demand bills finally got paid off, plus a Greek summer holiday to look forward to – just enough money left to buy some flip flops and a bucket and spade...

New employee at AMIGA INC.

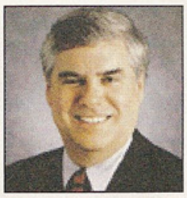
The latest addition to the Amiga Inc. payroll is Dr. Rick LeFaivre. He joined the company in April and is the new Chief Technology Officer, directly responsible for the future direction of all the Amiga technology.

The hiring of Dr. LeFaivre shows Amiga Inc.'s commitment to obtaining staff of the highest calibre. He has had series of high-profile positions in leading technological companies.

Before joining Amiga Inc., Dr. LeFaivre served as Senior Vice President of R&D and Chief Technology Officer for Inprise Corporation, the company formed from the merger of Borland International and Visigenic Software. He was previously Vice President of the Advanced Technology Group at Apple Computer; Senior Vice President of Product Development and Chief Technology Officer for the Computer Curriculum Corporation subsidiary of Viacom, Inc.; Vice President of Engineering for the Network Systems Division at Silicon Graphics Computer Systems; Director of Windows and Graphics Systems at Sun Microsystems; and Director of Computing and Visual Systems Research at Tektronix, Inc.

His responsibilities have included overseeing international R&D centres for Tektronix in Leuven, Belgium, the Apple/ISS joint venture in Singapore and Inprise R&D centres in Singapore and Sydney, Australia.

Dr. LeFaivre received his PhD in computer science from the University of Wisconsin and was formerly a professor at Rutgers University, the State University of New Jersey. He has published computer science literature and has acted as an expert witness in technological matters.



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Rick's history is littered with big-name computing companies like these.

OS3.5 rumours

Some more details were apparently divulged concerning the forthcoming OS3.5 update in a recent posting to the Amiga usenet group, comp.sys.amiga.misc. Since at least half of what you read on c.s.a.misc is best disregarded entirely, the following rumours cannot yet be verified as fact by *Amiga Format*.

INTERNET

Internet support in OS3.5 will come in the shape of a special version of the *AWeb* browser. The TCP/IP stack will be *Miami* and there will be integrated network support. The email API and a simple client will be from Finale Development, the authors of *ClassAct*, *Voodoo* and *New York*.

WORKBENCH

It will no longer be necessary to use a shift key when selecting more than one icon from the desktop. The submenus of the WB screen will be optimised for better handling

ICONS

Standard and *NewIcons* will be supported. AppIcons will support animation. When selected, icons will glow; when dragged they'll become semi-transparent. You'll be able to set the task priority of a program via the Workbench Icon Information function.

POWERPC

WarpUp will be integrated in its latest version. An important part will be the Preferences settings which will complement the integration.

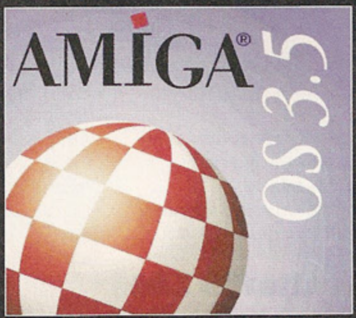
INSTALLER

It will be possible to open the installer on its own screen and you will now be able to go back to a previous step in the installer too.

PRINTERS

The printer support will be redesigned completely so that 24-bit printing will be possible from Workbench. *CyberGraphX* and *Picasso96* will be supported. There will be only one Printer Prefs in the future, which will also have a preview window immediately showing the changed settings.

Is this what we can expect from OS3.5? Only time will tell.



DATATYPES

DataTypes will be reworked, improved and 24-bit capable. New DataTypes will be provided for AIFF, JPEG and GIF. The AmigaGuide DataType will be completely redesigned.

Documentation will be in HTML in German and English.

Back Orders for OS3.5 anyone?

Blittersoft are leaping into the fray with the first offer of back orders of the eagerly-awaited OS3.5 package from Amiga Inc. Anyone willing to put their name on the dotted line today will get the full package on the day of release for only £34.95. As a special incentive, Blittersoft are offering a bundle of *Fusion* and *PCx* for only £15 if ordered at the same time. Remember that you'll need Kickstart 3.1 for OS3.5, but they also do that too...

Continued overleaf ➡

100 issues ago

AF24 July 1991

AMIGA FORMAT



We look at what was going on in the Amiga market 100 issues of *AF* ago...

■ **Cover feature: The New Amiga in Your Hands was all about the CDTV. This feature goes into depth about what the implications are for Commodore releasing a CD-based machine and about the A570, the CD drive for an A500 that eventually came out two years late and was too expensive and unwanted.**

■ **On the disks: Two disks with the full games of *Vaxine* and *Archipelagos*. This was before the ELSPA agreement to ban all full-price games appearing on coverdisks.**

■ **News: Calls of the 90's pack reduced by £100 to £499, Microway flicker fixer reduced in price from £325 to £125 (and it still wasn't any good), Amiga Centre Scotland animation festival planned and Alternative Image to sell *Real 3D*.**

■ **Prices: *Digiview Gold*, the premier slow-scan video digitiser. You either needed a greyscale security camera or a video with a very good pause to get greyscale images, and a colourwheel for the camera to get colour images. This magnificence? Only £149.95 to you squire. Ben actually sold loads of them at HB Marketing...**

■ **Games reviewed included: *F15 Strike Eagle* (Microprose) 90%, *Switchblade II* (Gremlin Graphics) 70% and *Eye of the Beholder* (US Gold) 92%.**

■ **Serious products reviewed: First appearance of scoring in the serious section. *3D Construction Set* (Domark) 91%, *Bars and Pipes Pro v1* (Blue Ribbon) 85%, *Wordworth* (Digita) 82%.**

■ **Notes: *Amiga Format* was two years old and going from strength to strength. We're now nearly 10 years old and still doing fine – a record for a home computing magazine?**

■ **Pages: 220** ■ **Cost: £3.95**

More PPC software for you



Sticking with the credo which says that the only PPC packages worth doing are for graphics programs, Nova Design are about to unleash PPC versions of some of *ImageFX*'s effects. *PowerStation* is apparently so fast that some beta testers have hit save twice because they didn't realise that the job had already been done, but to get the whole package you'll have to wait for the full release of the software, which should be out at around the time you read this.

PowerStation is designed only for use with the latest version of *ImageFX*, version 3.2, and it offers the following new effects:

Bubble – Creates multiple bubbles over your selected image. You can control the animation and optional colour of the bubbles easily. Create an undersea effect or even effects like psychedelic champagne bubbles!

Fire – One of *ImageFX*'s most popular effects, Fire can create flickering candle flames, gas-stove flames, raging forest fires and more. All parameters can be animated or controlled through a single slider.

Clouds – Recently added to *ImageFX*, the Clouds effect can create amazing multi-layered fractal clouds. It can also be used to create fog or smoke over images, simulated explosions or even seamless textures of landscapes with cloud patterns animating across them.

Liquid – This is an endlessly fascinating effect that distorts your image as if it were on water. You can create funhouse mirror distortions or unique video transitions with this effect.

FXForge – Based on the same formulae used in Adobe *Photoshop*'s *Filter Factory* package, *FXForge* can create an infinite number of custom special effects using mathematical formulae. Colour effects, distorting effects and lighting effects are all possible with this amazing engine. It remains fully compatible with the thousands of effects available on the Internet for Adobe's *Filter Factory*.

At the moment there's no direct UK pricing, although you can order directly from Nova Design for only $79.95 (about fifty quid). Just call them on 001 804 282 1157 or, if you live in the States, on 1 800 IMAGE 69.







Three of the effects you can do much faster with *PowerStation*.

Free Java Compiler

RamJam Consultants Ltd. have produced an Amiga version of *Jikes*, IBM's open source Java compiler.

***Jikes* will compile standard Java source code into optimised Java byte-code which strictly complies to the Java Virtual Machine specification. To develop with *Jikes*, the standard Java classes will be required, such as Sun's *JDK*.**

Ramjam Consultants Ltd

To run compiled Java code on an Amiga, a JVM is needed, such as a port of TransVirtual Technologies' *Kaffe* or the soon-to-be-released Amiga-specific *Daytona* from Nordic Global. The Amiga version of *Jikes* also requires the ixemul.library to run.

Visit RamJam's website at: http://www.ramjam.u-net.com/ for more information and to download *Jikes*.

The Jikes website can be found at: http://www.research.ibm.com/jikes/.

Voyager 3 features announced

Oliver Wagner has at last released some information on the forthcoming update to *Voyager*, Vaporware's Amiga web browser.

The single biggest addition to the new *Voyager 3* will be the long-awaited support for JavaScript. *Voyager 3* promises 'the fastest JS implementation in the industry', since it will feature a Javascript compiler which will convert the JS code into a special pseudo-code for execution by a fast interpreter. The Document Object Model to be employed is based on that of Microsoft's *Internet Explorer*.

There's no real news on Java, however. Vapor had intended to use the Merapi JVM from Haage and Partner but that project seems to have been shelved. Oliver Wagner has stated that he now intends to talk to Nordic Global about their recently-announced *Daytona* JVM with a view to producing a Java plug-in for *Voyager*.

Many modifications have also been made to the HTML layout engine. Work is in progress on supporting CSS 1 (Cascading Style Sheets) which 'will most likely be ready in time'.

Other features currently being worked on for *Voyager 3* include a *Shockwave Flash* player plug-in, updated image decoding with support for CGX 4 in-buffer bitmaps and support for *FBlit* on AGA machines so that images can be stored entirely in fast RAM. Finally, there will be an improved and completely customisable GUI with 'coolbars' and an integrated *Contact Manger* for bookmarks.

No release date for *Voyager 3* has been announced.

Much improved from the last version, *Voyager 3* is just around the corner.



Sabrina offline more like! Eric Schwartz has done the decent thing and got his superb Sabrina Online strip (we have a couple every issue in Mailbag) put into print in comic form. The comic is published by United Publications and it costs about £1.45 per issue. It should be on sale at any decent comic shop and it will be listed under United Publications in Diamond's Previews guide. You can reach UP's Martin Dudman at UP@lupin.demon.co.uk or visit the UP website at: http://www.lupin.demon.co.uk

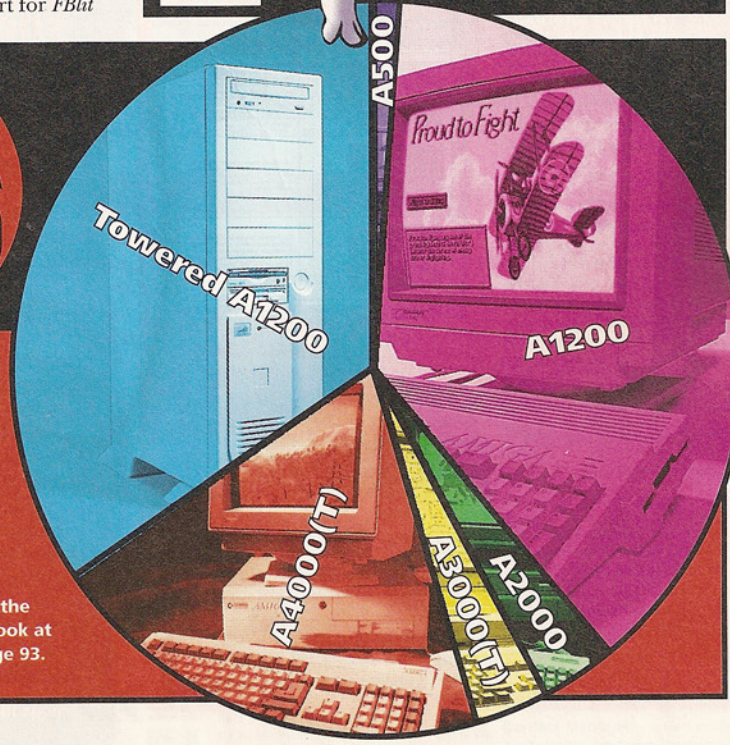
Online, in *AF* and now available from all good comic stores.

VOX POP

We asked the subscribers to the afb mailing list to answer the following simple question:

What sort of Amiga do you have?

If you want to take part in the next vox pop, just have a look at the afb information on page 93.



Vital Horgan

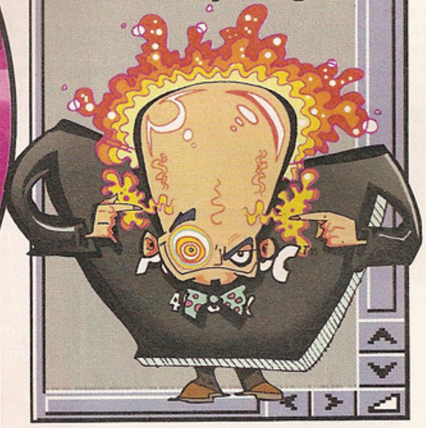


We're now entering a strange chapter in the Amiga saga. Finally, eventually, and contrary to many of our expectations, there are signs of real things happening over at Amiga Inc. There's the news of OS3.5, staff recruitment adverts on the Amiga Inc. website, the QNX announcement and the relocation and reorganisation of Amiga Inc. itself. It all bodes well for the near future – maybe the transition from Classic to Next Generation will come sooner than we thought.

But then all of a sudden we get a rash of G3 and G4 PPC expansions, offering not only the latest CPU performance but also things like USB and Firewire interfacing. Exciting stuff indeed, but is it too little too late? With prices for these cards hovering roughly around the £700 mark, who could avoid thinking how far that would go towards the cost of a Next Generation machine, and whether the cash would be better kept in that biscuit tin under the bed for just a little while longer?

A major factor in resolving that dilemma must be the amount of added productivity one of these expansions will actually deliver. Need I remind you of the crushingly disappointing array of PPC software that has appeared so far? I think it's only fair to assume that things won't change a great deal there so that puts a great deal of importance on the performance of 680x0 emulation. Just how fast they can push our Classics remains to be seen. Still, there's always the USB, fast SCSI and Firewire ports which could give your overall system performance more of a boost than the actual CPU upgrade. Maybe I will get one after all...

Tony Horgan



Continued overleaf ➡

Telecommunications Boycott

The Campaign for Unmetered Telecommunications is holding a "net strike" on Sunday June 6th. Because of the date this story will only be of interest to subscribers, but CUT hope to encourage Internet users in 10 European countries to unplug their modems and hang up their phones for the whole of that day. This boycott is intended to persuade the European telecommunications companies to introduce flat rate charges for local calls. To join the campaign, take a look at the CUT website at: http://www.umetered.org.uk/

COMPETITION WINNERS

The winners for our recent competitions are as follows:

PRELUDE (*AF119*)
The winner of a Zorro Prelude card and *Samplitude Opus* is: Jani Kilpilinna, Tampere, Finland. Runners up each receive *Samplitude Opus Lite*: Gerard Volders, Den Andel, Netherlands; Graham Steele, Falkirk, Scotland; W. Van Heeckeren, St. Peters, Australia.

POWER FLYER JUNIOR (*AF120*)
Five winners each receive a Power Flyer Junior: D.Williamson, South Ronaldsay, Orkney; Graham Burt, Northampton; Paul Rabett, Stoke-On-Trent; P Farrimono, Manchester; Tara Southon, Tunbridge Wells.

ANALOGIC (*AF120*)
Each person receives an externally-cased SCSI drive: 4.3Gb – M.P. Askey, Burton-On-Trent; 1Gb – T. Burnett, Maryport, Cumbria; 540Mb – E.M. Rawlings, Penketh, Warrington; Stephan Martin, Annezin, France.

Return to Scala

Eyetech have signed a deal to distribute *Scala MM400* in the UK. This version is much improved over the *MM300* given away on *CU*'s coverdisc and in the Amiga Technologies Magic Pack with HD A1200s. It's also now on CD for ease of use. The CD not only contains the full de-dongled *Scala MM400*, it also includes 130Mb of clip art, colour fonts, sample presentations and a fully interactive manual.

Scala MM400 is available from Eyetech from just £59.95. Upgrades from *MM300* are just £39.95 (original *MM300* coverdisk, CD or proof of purchase, or *MM300* registration card required).

You can contact Eyetech by calling 01642 713185.



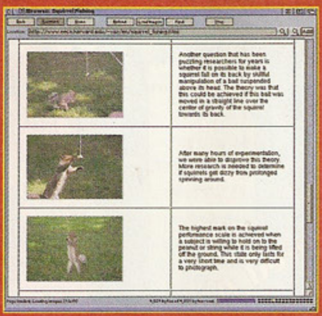
The latest version of *Scala* looks like being the best yet.

AF Net Corner

SQUIRREL FISHING

http://www.eecs.harvard.edu/~yaz/en/squirrel_fishing.html

A rather strange site dedicated to the scientific investigation of Rodent Performance Evaluation. Apparently the squirrels in Texas are a lot smarter than those in Massachussets...



The little furry, furtive fellas are scientifically evaluated online.

FREE SAMPLES

http://www.futurenet.com/samplenet/

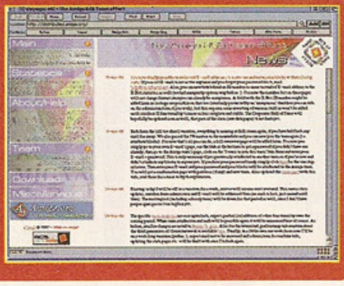
Samplenet is the ultimate sampling resource. It contains news, reviews, tutorials and, best of all, an absolutely enormous collection of royalty-free sound samples.



AMIGA CODE BREAKING

http://distributed.amiga.org/

The Amiga team is currently in sixth place in the challenge to break the RC5-64 code. Why not put your spare CPU cycles to good use and further the Amiga cause?



Left: Samplenet sounds good! Right: You can also get cracking on the RC5-64 code.

Other news

FREESERVE AND AOL IN LEGAL DISPUTE

Freeserve, the free Internet Service Provider owned by the Dixons Group, are taking legal action against rival America Online.

A report in the *Independent* newspaper claimed that the AOL-owned Compuserve had told its customers in the UK that Freeserve's free Internet access was only temporary and that users would soon be charged for the service.

Freeseve initially raised the issue last December, but an investigation by AOL found no evidence to support Freeserve's complaint. A formal writ has been lodged in the High Court but it's likely that a settlement will be made out of court.

USER-FRIENDLY LINUX

Caldera Systems have released *OpenLinux 2.2*. This version of the popular, freely distributable UNIX-like operating system is aimed at novice users. It features easier installation and a friendly GUI based on the K Desktop Environment. This means it can easily be made to act like a familiar Windows, MacOS or BeOS system.

OpenLinux 2.2 ships as a two-CD package for $50 and includes Corel's *Wordperfect 8* and *StarOffice*, which is StarDivision's *Microsoft Office* challenger. More information is available from the following site: http://www.calderasystems.com/.

BEOS 4.5 DUE SOON

BeOS 4.5 is scheduled for release in June. The previously-announced version 4.1 of this multimedia operating system will not now reach the market.

The new version of BeOS promises more and better hardware drivers and will include support for USB and the new PentiumIII.

QUICKTIME TO GO OPEN SOURCE

Apple have announced that its *QuickTime* streaming server will be put in open source domain. This is part of a new drive at Apple, having recently announced that portions of the forthcoming MacOS X would be made open source.

QuickTime 4.0 will allow the live streaming of multimedia data via the Internet. In other words, the content can be played as the file is downloaded. By allowing companies to modify the *QuickTime* server for their own needs, Apple hope to gain acceptance for its technology over rivals like Real Networks.

netconnect £49.95

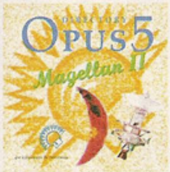


program : netconnect
version : v2.3
format : cd-rom or floppy disks
available : yes
awards : amiga format gold, 96%, cu amiga 94%
amiga magazin (DE) 85%, amiga plus (DE) 85%

The award-winning **NetConnect v2** is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. By using the new Genesis Wizard, a user should be able to connect to the Internet in a matter of minutes. Containing Genesis, Voyager-NG, Microdot-II, AmIRC, AmFTP, AmTelnet, AmTerm, NetInfo, AmTalk, X-Arc and the Contact Manager. Ideal for both an Internet or local area network connection.

- *Eleven Commercial Programs* - contains the highest quality Internet software, all commercial versions.
- *Truly Integrated* - the beauty of NetConnect v2 is the integration. Contact Manager works with Microdot-II, Voyager, AmIRC and more. Centralised MIME preferences works between all the programs.
- *Flexible Dock Bar* - setup and launch all your software from this advanced and flexible tool bar
- *Aimed Towards Beginners Through to Advanced Users* - NetConnect v2 is simple enough for the beginner to use to connect to the Internet for the first time, but powerful enough for the advanced user who may require a dialup connection and local area network (LAN).

dopus magellan II new £49.95



program : dopus magellan II
version : v5.8
format : floppy disks
available : yes
awards : amiga format gold, 95%

Directory Opus Magellan II is a complete Workbench replacement and/or file management based system. Magellan-II offers everything from file management (copy, rename, view, extract etc), dock bar creation (create your own dock bars - to launch programs, commands, scripts), advanced FTP functionality (with asynchronous operation), custom themes (24 bit icons, different backdrops, custom sounds and scripts, improved user and start menus (ala Windows start menus), greater lister functionality (with full drag and drop), custom menus and much more. Magellan-II is indispensable. Once installed and used, you will never want to go back to your 'original' Workbench ever again.

stfax professional £29.95



program : stfax professional
version : v3.7
format : floppy disks
available : yes
awards : amiga format gold, 95%, cu amiga 95%
amiga magazin (DE) 89%, Amiga Plus (DE) 96%

STFax Professional is a commercial fax/voice message program which enables you to use your Amiga as a digital answermachine. Send and receive faxes, create a simple or advanced tree based digial answer system for family members, create a fax on demand service, log numbers via caller-ID, call screen or blacklist phone numbers, setup a mini-BBS, use your modem as a telephone, control other programs etc.

- *Full fax modem support (class 1, 2, 2.0)* - fax from your favourite Amiga software
- *Advanced voice capabilities* - use your Amiga as an advanced (or simple) digital answermachine
- *Support for the PACE Solo, 3-Com Message Plus or Kortex Adaptix Independent Operation mode*
- *Mini-BBS* - setup your own small BBS
- *ScanQuix support* - use ScanQuix to directly scan documents from your scanner into STFax!

genesis £29.95



program : genesis
version : v1.0
format : floppy disks
available : yes
awards



Genesis is a new TCP/IP stack for the Amiga computer, allowing both dialup Internet access and local area networking, with the advanced facility to run more than one interface at one time (ie. keep your ethernet network connected, whilst putting your dialup connection on and offline - ideal for Siamese users, LAN'ing one or more Amiga's or an Amiga to PC/Unix/etc).

amigawriter £49.95



program : amigawriter
version : v1.2 (english version)
format : floppy disks
available : yes
awards : amiga magazine (DE) 87% 'very good'.

AmigaWriter is the newest word processor (or word creating) package for the Amiga. Officially ratified by Amiga International, thus supported by the "*Powered by Amiga*" logo, AmigaWriter contains some unique features for Amiga word processors: platform independent (full support for commercial, shareware or freeware plugins), ease of use (easy selection, true WYSIWYG, very Amiga-alike in action), full paragraph control, page formatting, chapter management, support for different image formats and much more. All version 1 users will receive the forthcoming version 2 free of charge (due late 1999).

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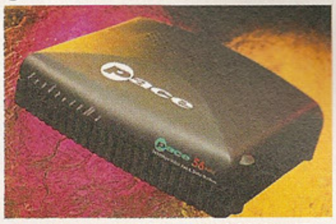
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Choose from three high-quality **branded** modems - the top of the range, award winning PACE 56K, the new PACE 'Solo' 56K or the middle of the range Dynalink 'MagicXpress' modem (well built, compact design, same colour as your Amiga). All ship with a five year warranty. The PACE modem's additional features include free lifetime technical support, UK caller ID (only modem available which supports this), a superb speakerphone and volume slider/control. All PACE and Dynalink 'MagicXpress' 56K modems are now v90 shipping ready - the agreed standard for 56K connectivity. Why not treat yourself to the brand new PACE 'Solo'? The 'Solo' can be used standalone from your Amiga. Want to go on holiday but need to receive fax and voice messages, but don't want to leave your Amiga running? The 'Solo' is the answer.

pace External 56K Modem



pace 'Solo' 56K Modem



Dynalink 56K External Voice/Fax/Data Modem	£69.95
PACE 56K External Voice/Fax/Data Modem	£119.95
PACE 'Solo' 56K External Voice/Fax/Data Modem	£189.95

modem pack options from £79.95

Various money saving packs are available. These are all based on the Dynalink v90 modem. Packs based on PACE 56K or PACE 'Solo' 56K modems available as an additional cost option.

Code	Pack Contents	£ Prices
PK01	56K Modem & STFax Professional	£ 79.95
PK02	56K Modem & NetConnect	£ 94.95
PK03	56K Modem & NetConnect & STFax Professional	£105.95
PK04	56K Modem & NetConnect, IOBlix-S, STFax Pro	£129.95
PK05	56K Modem & NetConnect, IOBlix IO, STFax Pro	£169.95

ADD £40 for a PACE 56K Modem (instead of the Dynalink 56K)
ADD £110 for a PACE 'Solo' 56K Modem (instead of the Dynalink 56K)
DEDUCT £30 for a Hypercom 3+ card (instead of the IOBlix IO card)

- All packs come with **free**, unlimited Internet connection - three options available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

home highway - ISDN from £89.95

With the launch of BT's 'Home Highway', ISDN is now affordable for the home user. Our branded Dynalink 'MagicXpress' terminal adaptor enables you to connect to the Internet at blazingly fast speeds (you need a high speed serial card to use ISDN). Various ISDN packs are available:

Code	Pack Contents	£ Prices
ID01	External ISDN Terminal Adaptor (TA)	£ 89.95
ID02	ISDN TA & NetConnect	£114.95
ID03	ISDN TA & NetConnect & IOBlix-S	£149.95
ID04	ISDN TA & NetConnect & IOBlix IO zorro card	£179.95

- All packs come with **free**, unlimited Internet connection - one option available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

high speed serial cards from £39.95

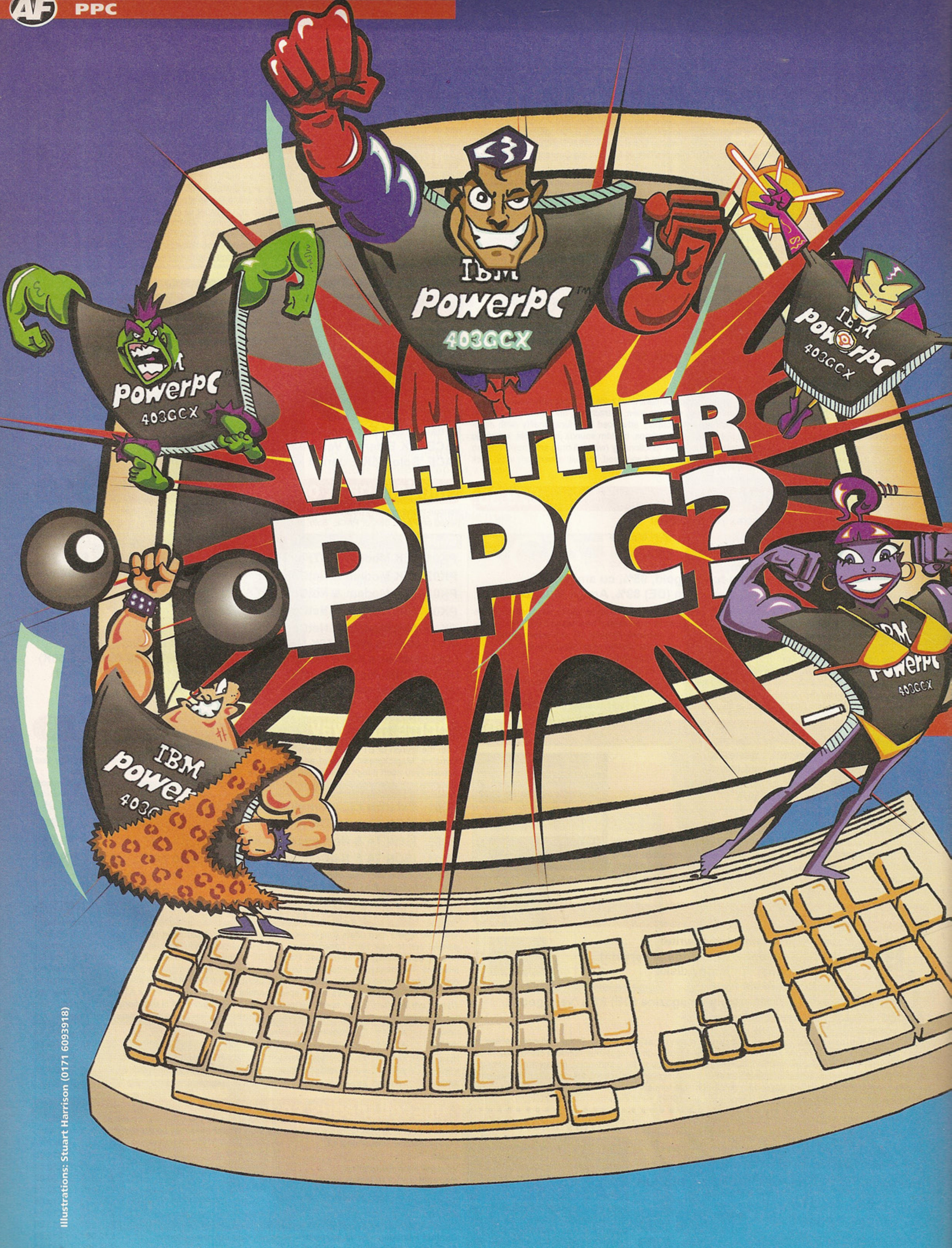
The new ***IOBlix*** card offers 4 high speed serial ports and 1 (2nd port option) high speed EPP/ECP parallel port to your zorro based Amiga. The parallel port offers both uni and bi-directional modes offering compatibility for all printers. Parallel ZIP™ driver included. The ***IOBlix*** also has a modular interface. Two modules are currently being developed: an AHI-compatible sound card and a SANA-II compatible ethernet card (the ***IOBlix-E***, due soon). The ***IOBlix A1200-S*** offers 1 high speed serial port, the ***IOBlix 1200-P*** offers 1 high speed parallel port. Both designed for A1200 towers. The new ***Hypercom 3+*** offers 2 high speed serial ports and 1 high speed uni/bi directional parallel port.

Model	Machine	Specifications	Price
IOBlix-S	A1200-T	1 x 460,800bps highspeed buffered serial port	£39.95
IOBlix-P	A1200-T	1 x uni/bi 500k bytes/sec parallel port	£39.95
Hypercom3+	Zorro-2/3	2 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500K parallel port	£69.95
IOBlix	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500k parallel port	£89.95
IOBlix-E	Zorro-2/3	Ethernet module for IOBlix zorro IO card	£ call

miscellaneous software

Various other individual software titles are available. These titles may be interesting to those not wanting to purchase NetConnect v2.

	By Disk	By EMa
Scalos - workbench replacer with advanced features	£20.00	£18.00
Voyager Next Generation	£22.00	£20.00
Microdot-II v1.1 (release) - email and news client	£22.00	£20.00
AmIRC	£22.00	£20.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc - system archive management tool (handles lha, lzx and zip archives)	£17.00	£15.00
Contact Manager - system addressbook, works with many net/comms programs	£12.00	£10.00
AmTelnet + AmTerm Package Deal	£20.00	£18.00



WHITHER PPC?

Illustrations: Stuart Harrison (0171 6093918)

The **PowerPC** promised a revolution for personal computing in general and for the **Amiga** in particular. **Richard Drummond** asks whether it has or will ever deliver?

Apple, IBM and Motorola announced the PowerPC alliance on a largely unsuspecting world in September 1991 with bold slogans such as "MIPs for the masses" and "From palmtops to servers". The plan was for a modern, powerful, cost-effective and scalable microprocessor architecture that would shake up the largely Intel-dominated CPU market.

The Amiga has been endeavouring to climb aboard that bandwagon in the last four years, desperately seeking a shot of elan vital for its ageing hardware. Arguably, neither has yet been entirely successful.

THE GENESIS OF POWERPC

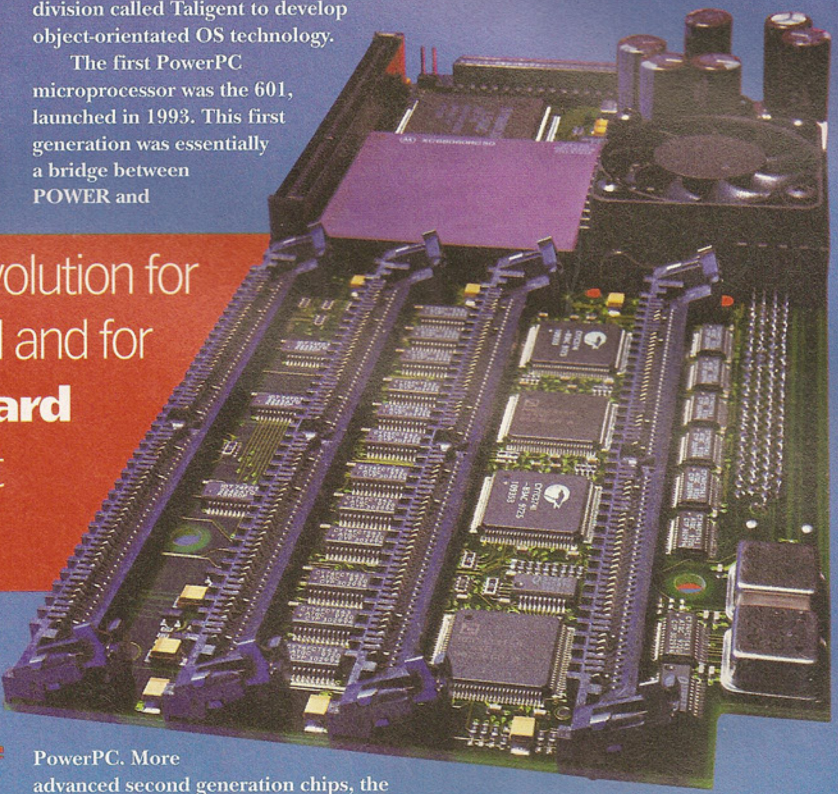
In the early nineties, Apple were evaluating RISC processors, wishing to harness this new power in their desktop machines. They favoured IBM's POWER (Performance Optimised With Enhanced RISC) architecture, an advanced and complex 32-bit, multi-chip processor developed for use in IBM's workstations from their earlier pioneering RISC work. After some negotiation, an alliance was formed between Apple, IBM and Motorola to produce a microprocessor version, intended as a successor to both Motorola's 680x0 series and Intel's x86, and the PowerPC was born.

> "The announcement outraged developers and users alike, both having already committed time and money to the PPC."

Although the PowerPC was to remain binary compatible with POWER, important changes were made to improve its effectiveness in the market targeted. POWER's instruction set was simplified, partly to reduce size and cost, partly to enable the production of aggressively superscalar designs and partly to shorten the development life cycle. Other modifications included incorporating the bus interface from Motorola's 88000 to permit more flexible memory access, the addition of hardware support for symmetric multiprocessing and making the memory model bi-endian. The architecture was also to make provisions for a 64-bit instruction set which would retain compatibility with the 32-bit set.

The PowerPC initiative was more than just a processor design, though. The PowerPC strategy called for an open architecture capable of running multiple operating systems. The PowerOpen Environment was formulated to permit software to be used transparently between different PPC operating systems and machines. A standard hardware specification, PReP (the PowerPC Reference Platform), was agreed on by IBM and Motorola, and Apple and IBM formed a joint division called Taligent to develop object-orientated OS technology.

The first PowerPC microprocessor was the 601, launched in 1993. This first generation was essentially a bridge between POWER and PowerPC. More advanced second generation chips, the 603, 604 and 620 (the first 64-bit PPC) followed later. The revolution seemed to be on course.



The CyberStormPPC: currently the most powerful Amiga accelerator around.

THE POWER AMIGA

All Amigas built to date, like the original Apple Macs, have been driven by a Motorola 68K series processor. But when development and volume production of this range was cut back drastically, a new processor architecture was required if the Amiga was to regain its place at the forefront of personal computing. Today, the PowerPC seems to be the natural choice of heir, but it hasn't always been so.

Before their untimely death, Commodore were working on designs around the Hewlett Packard HP-PA RISC, an earlier, more conservative RISC processor. Others favoured DEC's Alpha, long touted as the world's fastest mass market microprocessor. In fact, rumours persist that DEC themselves, when looking for a worthy operating system for their new chip, approached Commodore with the intention of porting AmigaOS to the Alpha, but Commodore refused; another of CBM's blunders. Quikpak, one of the potential owners of the orphaned, post-Escom Amiga, were also keen on the Alpha. Even more recently, Siamese Systems, famous for their Amiga to PC connectivity software, had plans in this

Continued overleaf ➡

RISC VS CISC

There are two ways of making a computer program run faster: either the number of instructions comprising the program can be reduced or each individual instruction can be executed more quickly. The term RISC (Reduced Instruction Set Computing) was coined for processors which try to achieve the latter; the former became known as CISC (Complex Instruction Set Computing). RISC processors are typically characterised by simplified, fixed-width instruction sets, large numbers of registers and fast memory access. CISC instruction sets aim for a closer correspondence to high-level languages. The distinction, though, has become blurred. An advanced RISC design like the PowerPC borrows elements from both schools and would more accurately be called a Rationalised Instruction Set Chip. Even processors like the PentiumII and AMD's clones, which implement a traditional CISC instruction set, function by first translating these instructions into simpler 'micro-operations' which are then executed by an optimised RISC core.

direction with their Project Alpha. The first plans for a Power Amiga were announced in 1995 by Escom, owners of the then-named Amiga Technologies. Around the same time, phase5 announced its own PowerUp project – a range of PPC accelerators for existing Amigas. The Power Amiga never saw the light of day thanks to Escom's bankruptcy and the confusion surrounding the Amiga's direction ever since. PowerUp eventually reached the market in late 1997.

A major setback for the role of the PowerPC in the Amiga's future occurred at the World of Amiga Show in May of last year, however. After a year of virtual silence, the new Gateway-owned Amiga Inc. unveiled its plans for the next generation Amiga and the PPC was no part of it. The new machines would be based on some unspecified multimedia processor (dubbed MMC, the Monster Mystery Chip, by the Amiga public) and a new operating system OS5.0, not derived from the current AmigaOS, would be used.

To add insult to injury, a transitional platform was planned to form a bridge between existing Amigas and the future. This so-called OS4.0 developer box would in essence be a standard x86-based PC. The announcement understandably outraged developers and users alike, both already having committed time and money to the PowerPC, especially since these plans contradicted an earlier statement from Amiga Inc.

Nevertheless, the Amiga market has continued its gradual move to the PPC, albeit with less enthusiasm than before. Amiga Inc, following a spate of u-turns and missed deadlines, are still to clarify their position with regard to the PPC, but things are now looking up. No fewer than four PPC accelerators have been announced that will all feature G3 or G4 processors, state-of-the-art CPUs from the PowerPC family, and the long-awaited update to AmigaOS, OS3.5, will include PPC support.



***Explorer 2260.* In the future, all Amiga games could be like this.**

BRAIN TRANSPLANTATION

The problem with migrating any computer platform to a new processor architecture is one of compatibility. Not only is a new version of any operating system required, but a solution must be supplied to allow any existing software base to remain usable. That is the primary reason why the majority of the computing world is still using CPUs which are descended from the twenty-year-old 8086.

The fact is that the PPC series is in no way compatible with the 680x0 range. Apple's solution to this problem was to build emulation into their operating system. The first release of MacOS for PPC machines actually contained mostly 68K code. While all Macintosh software continued to work, the big disadvantage was speed: early PowerMacs actually ran old Mac software at a slower speed than existing high-end machines.

However, as the MacOS itself was slowly ported piece-by-piece to the PowerPC, as Apple encouraged developer's to convert their applications and as new machines based on faster PPC chips appeared, the performance benefit of the new architecture was realised.

The tentative steps which the Amiga has taken towards PPC functionality so far have been very different indeed.

POWERUP

The PowerUp accelerators from phase 5 are dual processor boards; they feature both a 68K and a PPC processor. The immediate advantage here is complete compatibility – plug one of these cards into an Amiga and it'll continue to run all existing software at full speed. You might not even know there was a PPC processor in there.

The disadvantage is the increased complexity of the system, which reduces the PPC performance of these boards and hikes up the cost.

The PPC on the PowerUp boards is integrated into the rest of AmigaOS through special software. The PowerUp software consists of a limited PPC kernel which provides a similar functionality for PPC programs as *Exec* does for AmigaOS: it manages task scheduling, memory allocation, message passing, etc. The software also allows communication between the two CPUs. However, this creates its own special problem.

Because the PowerPC kernel is so minimal, most PPC software requires services from the rest of AmigaOS which only run on the 68K side of the system. When a PPC program calls a 68K function, or indeed vice versa, a context switch occurs. One program must halt, exchange information with another (running on a different processor) and wait for the result. Any data caches must be flushed to ensure memory coherency between the two processors. This causes a significant performance hit.

If software isn't designed carefully, a PowerPC version will actually run more slowly than if it were executing on the 68K alone.

CHRP

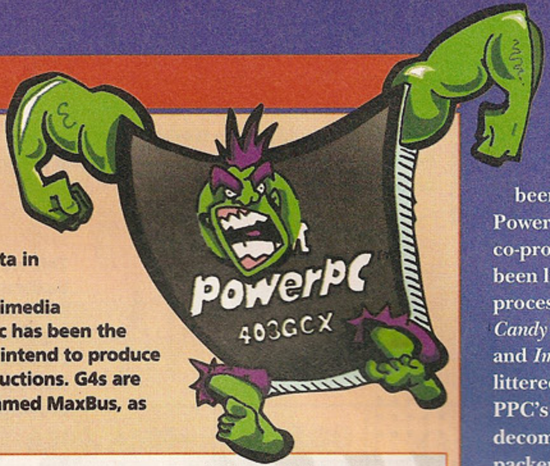
Apple weren't part of the original PReP hardware standard. A latter agreement which was a superset of PReP was agreed on by Apple, IBM and Motorola and was variously known as CHRP (Common Hardware Reference Platform) or PPCP (PowerPC Platform). CHRP was based on open platform-independent standards such as Open Firmware and PCI. However, since a CHRP-compliant computer was designed to run MacOS, it needed a copy of the MacOS ROM to do so. As part of the agreement, Apple stipulated that they must give approval for any CHRP motherboard design.

This was all fine when Apple were licensing their operating systems and allowing other manufacturers such as Motorola, Power Computing and DayStar to build Mac clones. However, Apple were losing money fast because the clone makers were producing better and cheaper machines. In late 1997, with the return of Apple co-founder Steve Jobs to the company, they reversed their policy on licensing and refused any CHRP designs. This effectively killed the platform.



G4 AND ALTIVEC

The next generation of PPC chips from Motorola, due later this year, will feature the new AltiVec technology. This is a multimedia extension similar in concept to the MMX extensions that Intel gave to its Pentium, but it's much more powerful. An AltiVec processor will possess a 128-bit vector unit capable of operating on streams of data in parallel to the normal integer and floating point units. Performance gains of up to 10 times are claimed for multimedia operations such as MPEG decoding. Unfortunately, AltiVec has been the cause of a rift between IBM and Motorola. Although IBM intend to produce G4 processors, they have no plans to include AltiVec instructions. G4s are also rumoured to have an new fast bus interface, code-named MaxBus, as well as improved support for multiprocessing.





Altivec Technology promise to give the PPC series a real performance boost in multimedia applications.

This context switching is such a critical issue that it prompted Haage and Partner to produce their own kernel for the PowerUp accelerators, called WarpUp. WarpUp performs the same role as the PowerUp software, but it allows faster context switching. It's also closer in spirit to AmigaOS in some ways. For example, WarpUp programs are stored on disk using an extension to the Amiga's native hunk format, while PowerUp uses the ELF format from the UNIX world. WarpUp, however, is incompatible with phase 5's kernel. It's impossible to run both simultaneously.

The release of WarpUp angered phase 5, who claimed that WarpUp was a hack, achieved by reverse engineering their own software. A rather childish war then ensued between the two companies and, as is usual in a war, everybody suffered.

Initially, developers preferred phase 5's solution. Perhaps this was just inertia or perhaps it was because PowerUp was the only one of the two with free development tools. Previously, H&P's commercial *StormC* package was required to program for WarpUp. This position has changed with recent versions of the freely available GNU egcs and *VBCC* compilers. Indeed, it now seems that WarpUp is winning.

Most new software is designed for WarpUp and WarpUp itself is being released as part of the AmigaOS3.5 package. Other points in its favour are that WarpUp supports both PPC-only and mixed binary shared libraries, it's hardware independent and H&P's forthcoming 68K emulator runs under it. These last two are both important issues for the new G3-only accelerators planned for the Amiga.

The PowerUp design has suffered much criticism. People say that the PPC performance is crippled by the lack of an L2 cache and the overhead of context switching. In hindsight, and especially in the wake of recent announcements, one could argue that following the emulation path similar to the Mac would have been better.

To be fair though, producing a PowerPC-only board for the depressed Amiga market would have been an even more risky business. After all, the Amiga had no guiding force, no Apple to develop the operating system or to support developers. Would users have bought a PPC-only board when little software to harness its power was available and when their existing software would run more slowly?

"The sad fact is that the PPC Amiga still lacks a killer application, a real attention-grabbing piece of software."

PowerUp was a brave concept which has established the viability of the PPC Amiga platform. Now the awareness of users, developers and Amiga Inc. to the PowerPC has been raised, other solutions are looking a lot more feasible.

WHERE'S THE SOFTWARE?

The PowerUp boards have been with us for well over a year now and yet PPC software for the Amiga is thin on the ground. This shortage can be attributed to a number of causes.

Firstly, the context switching problem means that not all software would benefit from being ported to the PPC. Secondly, the PowerUp vs WarpUp debate has confused and discouraged both users and developers. Thirdly, the uncertainty of the PPC Amiga's future, due to the WOA98 debacle and Amiga Inc.'s dithering, has meant that commercial developer's consider PPC development to be too risky.

The PPC software which has been released tends to use the PowerPC merely as a number-crunching co-processor. Commercial software has been limited largely to image processing, such as *Elastic Dreams*, *Candy Factory Pro* and plug-ins for *PPaint* and *ImageFX*. The Freeware arena is littered with tools which harness the PPC's power for compression and decompression, mainly things like file packers, archivers and codecs for handling images and MPEG streams.

Games typically require less support from the operating system though, and so could potentially benefit the most from the PPC, but no commercial games have yet been released in PPC versions. The games that are available have been ported from open source initiatives: *Doom*, *Descent*, *Abuse*, etc. While these help to comfort Amiga users for the cash they laid out on their PowerUp boards, it's hardly reassuring.

A contributing problem is that CPU speed isn't the only limiting factor on the speed of games. The restrictive bandwidth to AGA or ZorroII graphics memory incurs its own penalty.

Amiga game development in the last few years has been notoriously fickle, with scores of games announced but very few actually surviving to be published. There are currently about 50 games in the works, many of which have PPC support planned. How many of these will ever see the light of day is unknown. There are even several projects in progress which will run on PPC Amigas only, such as The World Foundry's epic, *Elite*-inspired, space simulation, *Explorer 2260*, and Digital Images's port of Psygnosis's PlayStation hit, *WipeOut 2097*. Both of these games will require WarpUp.

Emulation is another area of software development that benefits from sheer processor grunt. PPC versions of *MAME* (the arcade system emulator), *Frodo* (the C64 emulator) and even *UAE* (the Amiga emulator), to name but a few, have been released. PPC ports of *Fusion* and *PCx* (the 68K Mac and Wintel PC emulators respectively) have long been promised but are still uncertain.

The sad fact is that the PPC Amiga still lacks a killer application, a real attention-grabbing piece of software. Hopefully this will change soon. The PPC kernel issue seems to have resolved itself; the imminent arrival of G3 Amigas and 68k emulation will solve PPC performance problems and the promise of fast PCI-slot graphics cards will overcome slow graphics access.

Continued overleaf ➡

THE FUTURE

The truth is that many of the original PPC goals have failed. PowerOpen and Taligent are dead; CHRP, if not entirely dead, is very critically ill. The development of PPC versions of operating systems such as OS/2, pOS, Solaris and WindowsNT have long since been shelved. Even a future for PPC BeOS is unlikely. Unfortunately, the only place you can find a PowerPC in a personal computer is in a PowerMac. IBM and Motorola seem content to ignore the rest of the desktop market and dance entirely to Apple's tune, the former concentrating solely on its embedded processor market and the latter on its workstations.

The failure of the PowerPC to conquer the world is disappointing because it has a lot to offer. The PPC is a simpler design than the ubiquitous Pentium and its clones. Not only does this mean a potentially better performance to price ratio, it's easier to build PPCs at higher clock frequencies; IBM have already demonstrated models running at 1GHz. Moreover, the computing world is poised to make the break to 64-bit architectures. The PowerPC already has this covered since it's part of the original specification. Intel, on the other hand, are developing a new architecture in conjunction with Hewlett Packard as a 64-bit replacement for the x86 range, and it's yet to be made known how these new IA-64 processors will achieve legacy compatibility.

Amiga Inc.'s snubbing of the PPC was apparently because IBM and Motorola lacked an adequate 'roadmap' for the future. Given the above, I can't see how this is true. It's about time Amiga Inc. made definite plans for the new Amiga hardware. Does this MMC actually exist or is it merely a hypothetical processor, posited as a minimum for hardware performance? It's hard to see how they could find a better choice of CPU than a new G4 AltiVec processor. The AltiVec will offer exceptional multimedia performance and QSSL, the supplier of the QNX micro-kernel for the next generation Amiga's operating system, already produce a PPC version.

The future of the Amiga at the moment could be said to be looking a lot rosier than it has done in a long time, but unless Amiga Inc. can communicate with the Amiga community a lot more openly, the community will carry on the PowerPC revolution without them.



COMING SOON

All these planned Amiga G3/G4 accelerators will be PPC-only solutions and will run AmigaOS with Haage & Partner's 68k emulator and WarpUp stored in FlashROM. The emulation is claimed to achieve 68060 speeds on a 300MHz G3.

BRAINSTORMER

This was the first G3 card announced for the Amiga by the generally unheard-of German Amiga hardware developer Escena. The Brainstormer project is unusual in that it was originally supposed to be based on an Alpha processor and is designed to connect via a ZorroIII slot, rather than the CPU slot. It will feature SDRAM and a PCI interface. ZorroII and dual-processor versions are also likely.

CYBERSTORM AND BLIZZARD G3/G4

Initially, phase 5 announced only the CyberStorm G3 cards for the A3000 or A4000, but when met@box (previously PIOS) released their plans for the AmiJOE, phase 5 quickly revised the project with new specifications, prices and an A1200 version. Both the CyberStorm and the Blizzard will accept either a G3 or G4 processor in a ZIF socket with a 1Mb backside cache. The CyberStorm will feature on-board UltraWide SCSI, the Blizzard Ultra SCSI. Both will have SDRAM, PCI and Firewire interfaces.





AMIJOE

The AmiJOE cards from met@box are based on the company's Mac G3 cards. Versions will be produced for the A1200 or A2000/A3000/A4000. Both will feature a G3 processor with a 1Mb backside cache and SDRAM. The A1200 version will fit into a desktop case and will have a local bus connector for either a USB or Fast SCSI 2 interface.

The A2000/3000/A4000 version will have on-board USB and a PCI interface. A MultiJoe card is planned for the PCI interface which will provide an Ultra SCSI controller and a 2D/3D graphics accelerator.



TWISTER G3

The Twister had long been rumoured to exist as the ViperPPC. It's a collaboration between ACT (manufacturers of the Apollo range) and Titan Computer. It will be produced for the A1200 only and will feature either a G3 or G4 processor with a 1Mb BSC, two PCI slots and SD-RAM. Proposed PCI cards include the TwisterVision, a 2D/3D graphics accelerator based on the Riva TNT2 chip, and the Twister-SCSi, an UltraWide SCSI controller.

Latest News in Brief

72pin Memory prices continue to rise

The manufacturing of 72 pin memory simms has now all but ceased, and as a result prices of those that are available are still rising on an almost daily basis. The wholesale price has risen 440% since the third quarter of 1998.

We are buying Amiga compatible stocks at every opportunity to try to ensure a continued source of supply for Amiga users. However, we are finding - increasingly - that many of the 32mb simms still available fail to work properly with Amiga accelerators so please always ring to check memory prices and availability before ordering - prices can change significantly between the time of advertisement placement and publication.

The good news is - for the time being at least - we are offering a 15% discount on the price of simms bought with (and for) an Apollo or phase5 accelerator to help guarantee compatibility.

ULTRACONV 4 in stock - at last!

This superb new package will convert just about any picture or animation format, and has over 130 effects built in. Its completely open architecture allows functionality to be added via plug-ins (developer documentation is supplied on the CD) and full integration with other applications via extensive AREXX support. It will even save Quicktime movies with audio! It automatically detects and installs PPC drivers to speed up operations by up to 1400%.



UltraConv4 is available for just £39.95, or £29.95 if purchased with ScanQuix 4.

Bug-free replacement A1200 motherboards

A replacement A1200 motherboard is usually the best solution if you have a damaged or unreliable Amiga . . However, new A1200 motherboards, currently available from us and other suppliers, were made by Amiga Technologies/Escom in 1995/6. All these boards (as were those used in Amiga Magic Packs) were manufactured with two faults which have recently come to light:

- the CC_RESET signal is not implemented due to a fault in the GAYLE chip. This needs fixing for reliable use of any PCMCIA ethernet adapter
- 'VGA' screen modes exhibit horizontal tearing on many SVGA monitors due to a change in the A1200's video circuitry to reflect new EMC regulations introduced after the original A1200's were designed by Commodore.

All replacement motherboards supplied by Eyetech have both these faults fixed by us before shipping. Cheaper boards, without these fixes, may be available from other sources, but they will inevitably prove to be significantly more expensive in the long term.

Fully fixed replacement motherboards from Eyetech cost £129.99 (excluding ROMs).

Unlimited use Internet Packages with modem, Amiga s/w and 90 days free technical support now under £100

For less than the cost of three typical support/set-up calls to a 'free' internet provider, you can have:

- 90 days free technical support
- 10 email addresses
- 100% local (0845) call charges
- 25MB of Web space

. . . all for a one-off charge of just £29.95

Amiga Internet Packages at 33% discount until 30 May 1999 whilst stocks last

If you're not yet on the Net there couldn't be a better - or cheaper time to get connected. Until 30th May we're offering the superb Internet Connection package above, the acclaimed NetConnect 2.2 internet software suite and a 56K V90 external voice/data/fax modem with cables and PSU for a special price of just £98.95.



That's a saving of over £50 on the individual component prices!

Eyeline Direct - a monthly Amiga newsletter delivered to your door for just £6* per year!

In the fast changing world of computers and peripherals, and with an ever-expanding portfolio of Amiga products, we are finding it increasingly difficult to provide Amiga owners with comprehensive technical and pricing information via our monthly advertising pages alone. That's why we have launched Eyeline Direct.

Issue 1 is now out and includes guides to A1200 hard drive interfaces, things to consider when contemplating fitting a large (over4.3GB) hard drive and the pros and cons of fitting a CD writer or rewriter to your Amiga - as well as discount vouchers and special offers only open to Eyeline Direct subscribers.

Just ring, write or fax the Eyetech sales team to place your order.

* UK only. EC add £3.00, Worldwide add £6.00

FIVE NEW PRE-CONFIGURED MK4 EZ-TOWER MAGIC PACK SYSTEMS

Although the basic Amiga International desktop console Magic Pack still represents excellent value for money (see the box-out below) more and more customers have been asking us for new Amiga 1200s which are already EZTowered up. So here they are, five pre-config ured systems to suit different applicants and budgets. All systems come with brand new KS 3.1/WB 3.1 disk and manuals, mouse, 2mb graphics memory and a fantastic productivity software bundle including Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, & Pinball Mania & Whizz games. Hard drive versions also come with Scala MM300 preinstalled

A1200T-LE (A1200 T - Light Edition)

This is the best choice for existing A1200 users who want to upgrade to a new Workbench 3.1 machine and add their existing hard drives and other peripherals and accessories themselves.

A1200T-PS4 (A1200 ProSystem-4)

The A1200 Professional System 4 comes complete and ready-to-run with 3.2GB hardware, 24-speed CDROM, EZCD-XL buffered interface, '030/40 accelerator with MMU, FPU, 8mb and a CDDA/Amiga audio mixer output. Other options available - see table on the right.

A1200T-PS4/XL (A1200T ProSystem-4 XL)

This system is configured as for the A1200T-PS4 but with a faster CDROM and an 040/28MHz accelerator with FPU, MMU, 16mb memory and a pair of mains-powered 240w PMPO stereo speakers.

A1200T-SE (A1200 T - Studio Edition)

This is the system for serious Amiga-based multimedia work. It is configured as the A1200T/PS/4XLS but comes with an LS120 drive (reads & writes 1.44 PC diskettes & 120MB Amiga/PC cartridges), an EZVGA scandoubler/flickerfixer and a 15" SVGA digital monitor.

A1200T-SE/XL (A1200T - Studio Edition XL)

This is the ultimate A1200 multimedia tower system. It is configured as the A1200T-SE system above and uprated to include a CDReWriter with MakeCD software and 10 blank CD-recordable disks, a 4.3GB hard drive, an 060/66 accelerator with 32mb memory, a 17" digital SVGA monitor, a Prelude 1200TW full duplex hi-fi sound card and software and a 600 watt PMPO amplified sound system with stereo speakers and subwoofer.

System Components A1200T -	LE	PS4	PS4/XL	SE	SE/XL
Mk4 EZTower	Yes	Yes	Yes	Yes	Yes
PC keyboard & keyboard adapter	Yes	Yes	Yes	Yes	Yes
Upgrade to A4000 k/b and k/b adapter	+£20	+£20	+£20	+£20	+£20
A1200 motherboard with K/S 3.1/WB3.1	Yes	Yes	Yes	Yes	Yes
Sony floppy drive & EZDF0 interface	Yes	Yes	Yes	Yes	Yes
Magic Pack productivity software + 2 games	Yes	Yes	Yes	Yes	Yes
Upgradeable to full EZPC Tower system	Yes	Yes	Yes	Yes	Yes
Scala MM300 multimedia software	n/a	Yes	Yes	Yes	Yes
EZCD-XL 4-device buffered interface	n/a	Yes	Yes	Yes	Yes
EZTower CD audio/Amiga audio mixer	n/a	Yes	Yes	Yes	Yes
3.2GB Tower drive with WB3.1 installed	n/a	Yes	Yes	Yes	n/a
4.2GB Tower drive with WB3.1 installed	n/a	+£20	+£20	+£20	Yes
LS120 with 1 cartridge & EZIDE s/w	n/a	+£80	+£80	Yes	n/a
CDRom / CDReWriter + 10 gold disks	n/a	24x	32x	32x	CDRW+GD
1230/40 MMU FPU accelerator - 8 MIPS	n/a	Yes	n/a	n/a	n/a
1240/28 MMU FPU accelerator - 21 MIPS	n/a	+£60	Yes	Yes	n/a
1240/40SE MMU FPU accelerator - 30 MIPS	n/a	+£100	+£40	+£40	n/a
1260/66 MMU FPU accelerator - 51 MIPS	n/a	+£250	+£185	+£185	Yes
Memory included (ring for upgrade prices)	n/a	8MB	16MB	16MB	32MB
EZVGA scandoubler with flickerfixer	n/a	+£80	+£80	Yes	Yes
15" SVGA monitor	n/a	+£115	+£115	Yes	n/a
17" SVGA monitor	n/a	+£190	+£190	+£75	Yes
Prelude1200TW hifi full duplex sound card	n/a	+£140	+£140	+£140	Yes
Amplifier (PMPO watts), speakers (+ subwoofer)	n/a	n/a	240W	240W	600W+SW
Cost with options as specified:	£299.95	£549.95	£669.95	£999.95	£1799.95

If you don't have the need or the space for an A1200 Tower System then we can still supply brand new A1200 desktop console Magic Packs - either floppy drive only, or upgraded to a 170mb hard drive, EZCD-XL buffered interface and external CDROM socket.

A1200 diskette desktop console Magic Pack - £179.95 A1200 170MB HD desktop console Magic Pack - £248.95

LIMITED EDITION 1260/75LC 60 MIPS ACCELERATOR

Exclusively available from Eyetech - at a price lower than that of the 1260/66!

The fastest 680x0 accelerator for any Amiga is now available (exclusively) from Eyetech. Rated by Sysinfo at around 60 MIPS the accelerat is suitable for both desktop and towered A1200s. The integer processing speed of the 75MHz 060 is - in Simon Goodwin's words - 'awesom being up to 2200% faster than that of an 030/50! A.I. recommend an '060 processor to get the most out of OS 3.5 - see separate news sto The 1260/75 LC comes with a full MMU but no FPU as no internal or external Motorola FPU module will work at these speeds. As most Ami software is supplied with non-MMU versions, these should still easily out-perform the FPU versions on a lesser processor in all but a handful cases. And now for the best news of all. You can have the fastest O/S-compliant Amiga on the planet for just £299.95!

OS 3.5 UPGRADE PREPARATIONS

With OS 3.5 is on track for delivery in a few months time so now is the time to start preparing your A1200 to be OS 3.5-ready. We will be shipping OS 3.5 (estimat price £34.95) from the date of its official release. Why not place an advanced order to ensure you get your copy at the earliest opportunity? Amiga Inc recommend t following configurations:

For 'acceptable' performance:			To take full advantage of OS 3.5:		
'030 accelerator	ACC-030-40-1S	£59.95	'060 Accelerator	ACC-060-50	£267.95
Scandoubler/Flickerfixer	EZVGA range	from £48.95	16-bit sound card	ADPT-AUD-PL12-DT	£129.95
Modem	MOD-56K 56K	£69.95	I/O Accelerator	INT-SER-PTJR	£39.95
You will also need:					
3.1 ROMs	SYS-KS31-ROM	£29.95	. . . or SYS-KS31-MPUG (w/3.1 disks and MP s/w)		£49.95

SCALA MM400 CD now available and in stock



The best multimedia presentation software for the Amiga -SCALA MM400 - is now available on CD ex-stock from Eyetech. MM400 contains many more features than MM300 (distributed free with HD Magic Packs and as a CU Amiga coverdisk) making it even faster to create slick commercial presentations. The CD also contains 130mb of colourfonts, additional backgrounds, sample presentations and a full interactive manual on CD.

Scala MM400 is just £59.95. Upgrades from MM300 are just £39.95 (coverdisk or proof of purchase required).

Turboprint 7 upgrade to 7.03 now available from Eyetech

A significant update to Turboprint 7 has been released by Irseesoft taking the program to version 7.03. This fixes several bugs in drivers and GfxPublisher. The update program is now being shipped with all copies of TB7 sold by Eyetech. It is also available for download from Irseesoft's web site at **www.irseesoft.com**, or from Eyetech on floppy disk.

If you wish to obtain a copy from us you can order the upgrade by post or phone for £5 + carriage - code DVR-TB7-703UD.

When Faster means Slower

As notional CDROM speeds continue to climb - from 8x 40x and above over the first 12 months - do we really get a better CDROM performance on an Amiga? This answer yes, but only up to a point! The problem is that point w passed around the 20x mark - that is peak transfer rates about 3.0MB/s. Above that rate a higher speed mechanis actually slows down the performance of the CDROM for mo practical applications. Why? Because the higher notional da transfer is made possible by spinning the CDROM more quic ly - and the faster its working speed the longer it takes to rea that speed from the moment you click on its icon. In fact, 1998 Amiga Format review found that a 20-speed CDRO was faster in practice than a 24-speed unit for just this reaso Unfortunately 20x CD mechanisms are no longer available.

So why do CDROM manufacturers keep increasing t speed? Well, all mechanism specifications cost roughly t same to make - but - particularly in the PC world, if it has a bi ger go-faster stripe, the average purchaser thinks it must better and is therefore prepared to pay more.

On the A1200, if its performance you want, our recommend tion would be to go for a 24x unit - rather than a faster mech nism - every time. But if its go-faster stripes you need, we ca also supply those models as well!

Bare 24-speed CDROM mechanisms are available fro Eyetech for just £34.95. External A1200 24-speed syster with PSU, cables, buffered interface & s/w cost just £74.95.

EZPC-PRO & NEW ENTRY-LEVEL EXPANSION SYSTEMS FOR YOUR A1200

3 pre-configured EZPC-Pro systems to suit different applications and pockets

he EZPC system works by making the PC motherboard act as a slave processor to your A1200 - look-g after the operation of the systems accessories whilst you and your Amiga get on with creative work. You can of course use the PC as a computer in its own right if you really insist!)

t's also important to understand that EZPC A1200 expansion system is based on a real Amiga and is ot at all comparable with other PC-only systems running a clever, but slow, Amiga emulator as a PC pplication.

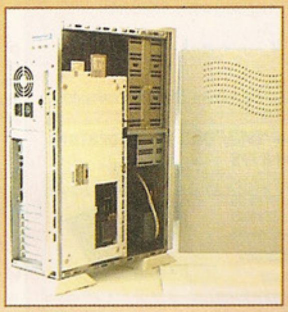
n fact there are such a range of applications that the EZPC system can open up to an Amiga user that e have introduced three systems pre-configured for different types of use. These are:

1200 EZ-PC TOWER-HSE (Home Studio Edition). £999.95

The HSE configuration comes complete with TV tuner with cut-and-paste teletext facilities, 24-bit video frame grabber and video clip capture card, 30 bit colour scanner, 56K modem and unlimit-ed internet access at local call rates - as well as the standard EZPC system components

1200 EZPC TOWER-DVE (Digital Video Edition). £1369.95

The DVE is fitted with a purpose-designed, hardware-based MJPEG non-linear video editing suite for home/semi-profession-al video production. It also comes with built-in CD Writer/ReWriter (with drag-and-drop CD writing software) for producing your own audio and video CDs.



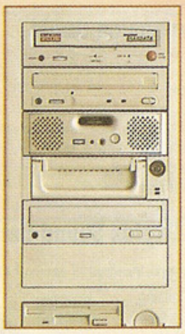
The EZPC Tower system showing the A1200, the PC rear sockets, card slots and removable side panels

1200 EZPC TOWER-XLS. £1995.95

This must be the ultimate creative multimedia expansion plat-orm for your A1200. It comes equipped with non-linear video editing hardware and software, A4 30-bit flatbed scanner, DVD ROM hardware & MPEG 2 decoder (for DVD video playback), CD ReWritable drive, 15" Colour Monitor, 56k data/fax/voice modem with voicemail and internet software - and much more.

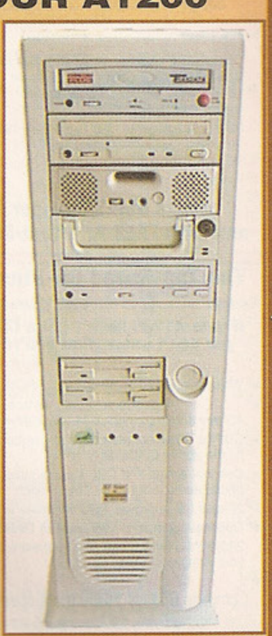
1200 EZPC TOWER-3.1+. £395.95

Finally, if your A1200 is feeling a bit tired we can supply your chosen EZPC Tower system with a brand new Kickstart 3.1 A1200, complete with Magic Pack software, 24 Speed CDROM, 3.2 GB hard drive (with W/b & Magic Pack software preinstalled), EZCD Mk4 interface and EZIDE software ready installed and connected up. All you need to do is to slot in your existing accel-erator, fit your old hard drive into the external mounting drawer provided (see photo) switch on and start using your new A1200 EZPC Tower system.



All these three packs are designed for you to fit your existing A1200 in the EZPC Tower and connect it up. This normally takes around an hour, but if you would prefer to receive your system ready to use, we can arrange to collect your Amiga, do the work for you and ship your new system back all ready to plug-in to mains and phone outlets! Please ring for details.

EZPC-Pro Tower Model	HSE	DVE	XLS
EZPC-Tower/250W psu/PC mouse/HD floppy	Yes	Yes	Yes
EZ-Key k/b adapter PC k/b & rem switch	Yes	Yes	Yes
Ultra DMA hard drive 4.2GB	Yes	Yes	Yes
32-speed CDROM	Yes	Yes	n/a
DVD-ROM(inc 20xCDROM capability)	n/a	+£79.95u/g	Yes
CDReWriter(inc 6xCDROM) & s/w	n/a	Yes	Yes
10 x blank CDR's 650MB	n/a	Yes	Yes
100MHz bus PC motherboard w/64MB	Yes	Yes	Yes
High perf high res 3D Gfx card w/MPEG-1	Yes	Yes	Yes
TV/teletext/framegrabber	Yes	n/a	n/a
Hardware MJPEG Video Editor	n/a	Yes	Yes
Hardware MPEG-2 Video decoder	n/a	+£59.95	Yes
CD-quality sound card with MIDI	Yes	Yes	Yes
Software controlled Amiga/PC audio mixer	Yes	Yes	Yes
Internal 60W PMPO monitor speakers	Yes	Yes	Yes
Siamese RTG2.5 software	Yes	Yes	Yes
Amiga PCMCIA & PC ethernet cards/cabs	Yes	Yes	Yes
30-bit high res A4 flatbed scanner	Yes	+£59.95	Yes
Internal 56k data/fax/voice modem	Yes	+£49.95	Yes
Unlimited access Internet package	Yes	+£49.95	+£49.95
15" SVGA monitor	+£109.95	+£109.95	Yes
17" SVGA monitor	+£189.95	+£189.95	+£99.95
Win 9.x/Lotus Smartsuite bundle	+£99.95	+£99.95	Yes
Miami Amiga TCP/IP stack	+£24.95	+£24.95	Yes
Cost with options as specified	£999.95	£1369.95	£1999.95



ENTRY LEVEL EZPC TOWER SYSTEMS NOW AVAILABLE FROM JUST £599.95

UPGRADE PACKS FOR EXISTING EZTOWER USERS JUST £499.95

The EZPC-Pro Tower configurations (featured on the next page) have produced a tremendous level of inter-est - and orders - from professional and serious home Amiga users alike. We have also had many requests for a lower cost, entry level solution, from those Amiga users whose budget is more modest. So here it is - the EZPC-SLE - giving most of the potential of the EZPC-Pro systems (featured opposite) in an affordable (but expansible) package.

The EZPC-SLE specification is as follows:

- ✔ Full EZTower Mk4 with removable side panels adapter & 250w PSU (not with upgrade kit)
- ✔ PC Keyboard & EZKey-SE/PC keyboard (not with upgrade kit)
- ✔ 100MHz-bus motherboard with 4x UDMA IDE ports
- ✔ 333M II CPU with 1MB cache memory
- ✔ 2 x high speed serial & 1 x EPP parallel port
- ✔ 32MB 100MHz memory
- ✔ 8MB SVGA SIS Graphics
- ✔ 16 bit 3D sound record and playback
- ✔ 3.2GB UDMA hard drive
- ✔ 24 speed CDROM
- ✔ PC mouse
- ✔ Remote Amiga/PC keyboard switch
- ✔ Siamese 2.1 RTG serial Amiga-PC networking software and cable.

and, to display your Amiga output on a PC screen,

either

- ✔ a TV/Teletext tuner with 24-bit still & video capture and Amiga composite video input,

or

- ✔ an Amiga EZVGA-INSD internal scandoubler and BMon switch

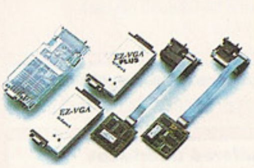
You will also need to have Windows 9x operating system and an SVGA PC monitor - see the panel on the EZPC-Pro Tower system panel for further information.

A collection, installation and delivery service is also available - please ring for details.

EZVGA Scandoublers & Flickerfixers from just £48.95

All scandoublers/flickerfixers allow the Amigas 15kHz modes to display on a PC SVGA monitor. Flickerfixers allow 15kHz interlaced screens to be displayed, rock-steady, at twice the standard vertical resolution. Other modes are passed through unaltered.

EZVGA-Mk2	Compact, external, upgradeable scandoubler (to full FF)	£69.95
EZVGA-Plus	Compact, external scandoubler with full FF	£99.95
EZVGA-SEFF	Economy external scandoubler with full FF	£89.95
EZVGA-INSD	Internal A1200/A4000 scandoubler (not upgradeable)	£48.95
EZVGA-INFF	Internal A1200/A4000 scandoubler with full FF	£79.95
EZVGA-INFF2	Internal A1200/A4000 s/doubler with full FF for BMON	£89.95



AMIGA SVGA MONITORS

For use with Amiga Zorro & the new PPC Graphics Cards, Scandoublers & the EZPC-Tower system



- ✔ Special pricing on scandoublers/flickerfixers bought with monitors from just £45 extra
- ✔ Monitor specifications are quoted as the highest vertical refresh rate at the maximum resolution. Higher refresh rates (>=72Hz) at lower resolutions are available and give a more visually relaxing display.
- ✔ Scandoubler/flickerfixers have resolutions governed by the Amiga's AA/AGA chipset and are restricted to a maximum vertical refresh of 73Hz and a max-*imum usable resolution of 724Hx566V.*

The PPC BVision supports 1600x1280@72Hz. You will not gain the full benefit of this superb graphics card without a monitor that sup-ports this resolution at that refresh rate.

14" SVGA 0.28DP, 1024Hx768V @ 60Hz **£89.95**
15" SVGA 0.28DP, 1024Hx768V @ 60Hz **£119.95**
17" SVGA 0.28DP, 1280Hx1024V @ 60Hz **£199.95**
Engineering workstation grade monitor, 160MHz, *Diamondtron* tube:
17" SVGA 0.25DP, 1600Hx1280V @ 75Hz **£399.95**

6 models of BMON are available from £39.95 - send for details

he BMon takes two video inputs - one from an Amiga's AA chipset (either directly or via a scandoubler/flickerfixer) and the other from a graphics card (BVision, Cybervision, Picasso, Ateo bus card etc) - and switches your SVGA or multisync monitor between them. The BMon uses high quality video switchers so - unlike conventional switchboxes - there is no significant loss of quality from either source. It can also be used - in its SMon form - for switching an SVGA monitor between a PC and Amiga system.

As standard the BMon accepts input from a BVision or Cybervision card and from an Eyetech EZVGA internal flickerfixer-2 . It is manually switched by a remote miniature tog-gle switch positioned - for example - on the front panel of a tower system.

The New Eyetech Mk 4 EZTower System - from just £79.95

"This is definitely one of the easiest solutions to building your own Tower" - *Amiga Format*

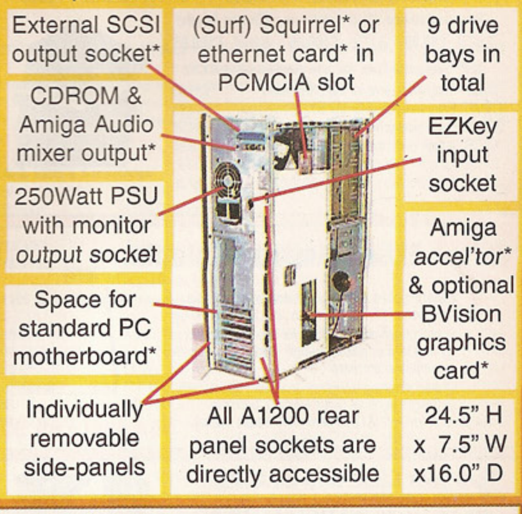
"The Eyetech Tower offers clever solutions with a Velcro easyfit mentality" - *CU Amiga*

- ✔ The easiest way to re-house your A1200 by far
- ✔ Expand your system with EZPC or Zorro slots
- ✔ 250 W PSU with PC and Amiga power connectors
- ✔ No expensive PCMCIA right-angle adapter required
- ✔ Available in 5 models to suit different skills and budgets
- ✔ *The only tower allowing both PC & A1200 in one case*

	Backplate kit	DIY* EZTower	Full EZTower
DFO: face plate & ribbon cable	Yes	Yes	Yes
Custom backpanel w/SCSI, audio KOs	Yes	Yes	Yes
A1200 power & LED adptrs	*Yes*	*Yes*	*Yes*
CE-approved metal PC case	n/a	Yes	Yes
No of bays/PSU capacity	n/a	9/250W	9/250W
Directly accessible PCMCIA slot	Yes	Yes	Yes
DIY assembly instructions	Yes	Yes	n/a
Installation instructions	Yes	Yes	Yes
PC board/Siamese compatibility	Yes	Yes	Yes
Assembled & A1200-ready	No	No	Yes
Eyetech installation option	No	No	Yes
Cost with options as specified	£39.95	£79.95	£99.95
With EZKey2/PC k/b (w/A4k k/b+£20)	n/a	£99.95	£119.95

*With the DIY EZ-Tower you have to remove the PC tower back panel and some internal shelving and fix the new back panel in place

* Optional extra not included in standard EZTower system



EZBus-Z4 - A new Zorro adapter from Eyetech featuring regular Z2 slots and 2x 19MB/s local bus connectors

EZTower-Z4 - A new EZTower specifically designed to take the EZbus-Z4

EZTowerZ4, k/b adapter, PC k.b & EZBus-Z4 £249.95
As above - introductory price - advance orders £199.95

Interfaces and Adapters: EZ-Key & DIY Tower Components

EZK2	Mk 2 Amiga/PC k/b adpt -> A1200 kbd direct connect	28.95
EZK2-A4K	A1200 EZKey MK2/6p -> 5p adptr/A4000 kbd bdle	48.95
EZK2-W95	Mk2 Amiga/PC k/b->A1200 dir connect +Win95 kbd	38.95
EZKSE-P	EZKey-SE Amiga 5p DIN k/b adapter for A1200/A600	18.95
EZKSE-A/K	EZKey-SE Amiga + 6p->5p adptr + A4000 kbd bundle	48.95
EZKSE-P	EZKey-SE PC 5p DIN k/b adapter for A1200/A600	24.95
EZKSE-P/K	EZKey-SE PC k/b adapter for A1200/A600 + Win95 kbd	34.95
HD-2/3	2.5"/44way -> 3.5"/40w+4w adpt & 2.5->3.5 mtg bracket	11.95
HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
FDF-FP	Tower faceplate adapter for A1200 int FD	4.95

Interfaces and Adapters: A1200 Ethernet, SCSI

PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	69.95

I/F & Adapters: Flickerfixers, Genlocks, Video Digitisers
GA Adapters, Monitor Switches, Monitor Leads

VGA-BV8M	BVision 8MB gfx card for A1200 (needs PPC)	159.95
VGA-BMON/F	SVGA Monitor Switcher - BVisn/CVisn & EZVGA INFF2	39.95
VGA-BMON/F	SVGA Monitor Switcher - BVisn/CVisn &15pHD In/Ex SD/FF	44.95
VGA-BMON/A	M/Sync Monitor Switcher - BVisn/CVisn & 23p RGB socket	44.95
VGA-SMON/F	SVGA MonSw - Ateo/Picasso 15pHD Gfx & EZVGA INFF2	44.95
VGA-SMON/F	SVGA MonSw - Ateo/Pic'o 15pHD & 15pHD In/Ex SD/FF	44.95
VGA-SMON/A	M/Sync MonSw- Ateo/Pic'o 15pHD & 23p RGB socket	49.95
VGA-AMON	Auto Amiga/CV64-3D m/sync monitor switch	39.95
VGA-M2SD	EZ-VGA-Mk2 compact external s/doubler PLL u/gradable	69.95
VGA-PLFF	EZ-VGA-Plus compact external SD+FF 23F-15F PLL	99.95
VGA-SDUG	SDBL2 to SD+flickerfixer u/g	40.00
VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgrad'le	48.95
VGA-INSD2	EZ-VGA- internal A1200 s/doubler for use with BMON	59.95
VGA-INFF	EZ-VGA- internal A1200 scandoubler w/ flickerfixer	79.95
VGA-INFF2	EZ-VGA- internal A1200 SD+FF for use with BMON	89.95
VGA-SEFF	EZ-VGA-SE scandoubler+flickerfixer 23F-15F Xtal	89.95
VGA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
VGA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
VGA-UNBF	Amiga 23pD-F ->15pHD-F VGA adapter	11.95
VGA-BUF	Amiga 23pD-F ->15pHD-F buffered adapter for A4000	16.95
PGB-24RT	ProGrab 24-RT Amiga par. port video digitiser (no psu)	94.95
PGB-PSU	PSU for ProGrab 24-RT	9.95
GLK-COMP	EZ-Gen composite video Genlock for A1200	69.95

Interfaces and Adapters: A1200 Sound cards & software

AUD-PL12-DT	Prelude1200 for A1200 DT console only	129.95
AUD-PL12-TW	Prelude1200 for Tower w/ribbon cble/audio I/O brkt, CD i/f	149.95
AUD-PL12-UG	Upgrade node from PL12-DT to PL12-TW	20.00
AUD-PLZ2	Prelude Zorroll 16-bit full duplex sound card	189.95
SMP-OP	Samplitude Opus 16 channel, virtual projects, FFT filtering	149.95
SMP-LE	Samplitude-LE 4 channel , virtual projects, FFT filtering	49.95

I/F & Adapters - IDE/ATAPI & software

IDE-FLYR	Elbox 4-dev 32 bit high perf buf'd A1200 IDE i/f	54.95
FLR-SPC-SP	ROM spacers for Elbox IDE-Flyer purchased w/ IDE-FLYR	4.95
FLR-SPC	ROM spacers for Elbox IDE-Flyer purchased elsewhere	9.95
12I-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CDROM s/w	28.95
12I-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	38.95
12I-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44 cabs, EZIDE	48.95
12I-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CDROM s/w	18.95
12I-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	28.95
12I-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
EZIDE-CU	P/x upgrade to EZIDE from competitive product	14.95
EZIDE-SP	EIDE/ATAPI enhancer/CDROM Software Bundle Price	9.95

I/F & Adapters - Serial, Parallel, Floppy & Clock port expanders

SER-PTJR	PortJunior - 460KB serial i/f for A1200	39.95
IOBL-S12	IOBlix 12S - 1.5Mbps serial i/f for A1200	49.95
IOBL-P12	IOBlix 12P - EPP parallel port i/f for A1200	49.95
SER-PTPL	PortPlus - 2x 460KB ser + 1x 800KB par i/f for A1200	79.95
IOBL-Z2	IOBlix Z2 - 4x1.5Mbpsser + 1x EPP par port Zorroll	89.95
IOBL-Z2PX	1x EPP par port expan for INT-IOBL-Z2 (to 4xs+2xP)	19.95
CLK-EXP	ClockUp 4-way clock port expander for A1200	19.95
FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95

Cables & Cable Adapters: Audio & Mains

AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F 'Y' mixer lead 1.8m	6.95
AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter 'Y' mixer	2.50
AUD-RCA-G	RCA(phono)-M -> 2xRCA-F gold plated adapt 'Y' mixer	3.50
IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.95
IEC-4X13	AC powerstrip 1xIEC-M -> 4x13A-F mains skt	14.95
LG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

Cables & Cable Adapters: Serial, Modem, SCSI, Printer

SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m for modem	7.95
SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m for modem	6.95
SER-NUL2M	Null modem cable w/ D9F & D25F at each end 2m	9.95
SER-NUL5M	Null modem cable w/ D9F & D25F at each end 5m	14.95
SER-NUL10M	Null modem cable w/ D9F & D25F at each end 10m	19.95
SER-25F9M	25p-F to 9pM serial RS232 adapter	4.95
SER-25M9F	25p-M to 9pF serial RS232 adapter	4.95
SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
SCS-25D/50C	SCSI cable DB25M -> Cent50-M 1m	9.95
SCS-25D/25D	SCSI cable DB25M-DB25M mac type 1m	9.95
SCS-50C/50C	SCSI cable Centr50M->Centr50M 1m	9.95
SCS-50H/50C	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC	19.95
SCS-50H/25D	SCSI-2 cable 50h/pDM->25D-M 1m for PPC	19.95
PAR-FULL	Bidirectional printer cable all pins connected	9.95

Cables & Cable Adapters: VGA, Keyboard, Switchboxes, Cables, Scart Cables (See also MON, SMON autoswitches above)

SW-S/K	Dual monitor & k/b switchbox	14.95
SW-S/K/M	Dual monitor, k/b & mouse switchbox	19.95
KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m	9.95
VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m	9.95
SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio	12.95

Cables: HD, CDROM, Floppy, Clock Port Data & A1200 HD Power

PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200 30cm	9.95
PD-2F	Power splitter floppy drive to hard drive + floppy	9.95
PD-30C	44->40way 3.5" HD data & pwr cabs - A1200	14.95
HD-KIT	A1200 full 3.5" hard drive fitting kit	24.95
22-2W-9C	22way-F x2 A1200 clock port cable 9cm o/a	5.00
34-2W-50C	34way-F x2 FDD ribbon cable for tower 50cm	5.00
40-2W-20C	40 way IDE cable 2 connector 20cm	5.00
CAB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len	9.95
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a	9.95
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 connector, 13cm o/a	9.95
CAB44-2W-60C	44way (2.5" HD) cable 2 connector, 60cm o/a	19.95
CAB44-3W-12C	44way (2.5" HD) cable 3 connector, 12cm o/a	12.95
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 connector,24cm o/a	14.95
CAB50-CUST	Custom cable 3x50way IDC SCSI + 1xCent50-F 60cm	19.95

Cables: HD, CDROM, Floppy Power Splitters - Tower Systems

CABPW-1W-1F	Power converter cab HD-M -> FD-F	4.95
CABPW-2W-1H1F	HD/FD power splitter HD-M->1xHD-F/1xFD-F	6.95
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F	6.95
CABPW-2W-2H	HD/CD power splitter 4p-M ->2x 4p-F 15cm	6.95
CABPW-2W-2H1F	HD/FD power splitter HD-M->2xHD-F/1xFD-F	8.95
CABPW-3W-3H	HD power splitter HD-M -> 3xHD-F	8.95
CAB-HD-PWXTN	4p-M -> 4p-F HD/CD power cab ext 90cm	9.95
CAB-HD-FD/4	23p-M-floppy -> 4p-F HD/CD power 90cm	9.95

New - ISDN Terminal Adapters, 56k Modems & Net Access Bundles

even lower prices

NET-ISP	One time setup/support/unlimited usage/no ongoing net access charge (0845 call charges only) with 25MB web space, 10 email addresses, 90 days free net support.	49.95
NET-...	128Kbps ISDN T/A + NET-ISP as above	139.95
NET-...	128K ISDN T/A, Netconnect 2 + NET-ISP	169.95
NET-...	56Kb fax/voice modem + NET-ISP as above	89.95
NET-...	56Kb fax/voice modem, Netconnect 2 + NET-ISP	99.95
MOD-56K	56K Voice/Data/Fax Modem External inc serial cable	69.95
MOD-ISDN	128K External ISDN terminal adapter inc serial cable	99.95
NET-REF	Internet Reference Book by D. Winder	2.00
NET-NC2	Netconnect 2.2 software	49.95

CDROM Systems including EZ-Tower & MT/DT Bundles

CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w	74.95
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	84.95
CD-DT/MT-24X	CDPlus Desktop/Minitower 24 x with CDROM s/w	94.95
CD-DT/MT-32X	CDPlus Desktop/Minitower 32 x with CDROM s/w	104.95
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixer/adapter	14.95
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm	6.00
CAB40-DDC	A1200 IDE skt adpt 40F-40M with mtgs 15cm	9.95
CD24-BARE	Bare 24 speed CDROM mechanism for twr/A4k	34.95
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism for twr/A4k	44.95

CDWriter/ReWriter Systems inc. EZ-Tower & MT/DT Bundles

CDR-BARE-2X8	EZWriter Mechanism (no MakeCD)	179.95
CDR-IN-2x8	EZWriter 2/8x with MakeCD for A4000,Tower	209.95
CDR-SE-2x8	EZWriter-SE external 2/8x with MakeCD	249.95
CDR-DT/MT-2x8	EZWriter Desktop/Minitower 2/8 speed with MakeCD	269.95
CDR-PL-2x8	EZWriter-Gold external 2/8x with MakeCD	279.95
CDRW-BARE-226	EZReWriter Mechanism (no MakeCD)	199.95
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	238.95
CDRW-SE-226	EZReWriter-SE external 2x2x6 w/MakeCD	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	299.95
CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
CDR-CDM4-UG	EZCDMk4+40+44way cabs + EZIDE w/CDR	30.00
CDR-CDFL-UG	IDE-Flyer high-speed IDE i/f, s/w, cabs purch w/CDR	50.00
CDR-DSK-10	Recordable CD media (WORM) 650MB x10	14.95
CDR-DSK-10-SP	Recordable CD media 650MBx10 pur w/EZWriter	10.00
CDRW-DSK	Single CDrewritable disk 650MB	9.95
CDRW-DSK-SP	Single CDrewritable disk 650MB pur w/EZReWriter	5.00
DVR-MCD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95

EZTowerZ4 Systems, Z4 busboard expansions

CASE-DTZ4	DIY EZTower-Z4 250W PSU, LED adpt, FD cab/fp	89.95
CASE-DTZ4-PL	DIY EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	109.95
CASE-DTZ4-PLZ4	DIY EZTwr-Z4, EZKey, PC kbd, FD cab/fp Z4 slots	239.95
CASE-DTZ4-PLZ4-S	DIY EZTwr-Z4 & Z4 adapter as above until April 1999	199.95
CASE-RTZ4	Ready-to-Use EZTwr-Z4 250W PSU, LED adpt, FD cab/fp	109.95
CASE-RTZ4-PL	RTU EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	129.95
CASE-RTZ4-PLZ4	RTU EZTwr-Z4 250W, PC kbd/adpt, FD cab/fp, Z4 slots	259.95
CASE-RTZ4-PLZ4-S	RTU EZTwr-Z4 & Z4 adapter as above until April 1999	219.95
ADPT-Z4	Z4 adapter for A1200 5xZ2, 2xZ2, 2xclock ports	149.95
ADPT-Z4-SP	Z4 adapter as above lst 100 orders	129.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00

EZTower Systems, MiniTower/Desktop Cases & Accessories

CASE-FT-DIY	EZTwr Mk4 kit w/250W, FD cab/fp, bkpl for self conv'n	79.95
CASE-FT-DIY-PLUS	EZTwr kit w/250W PSU, EZKey, PC kbd, FD cab/fp	99.95
CASE-FT-RTU	Ready-built EZTower 250W PSU, LED adpt, FD cab/fp	99.95
CASE-FT-RTU-PLUS	Ready-built EZTwr w/250W, EZKey, PC kbd, FD cab/fp	119.95
CASE-DT	Desktop case with 200W+ psu for HD/CDROM	29.95
CASE-MT	MiniTower case with 200W+ psu for HD/CDROM	29.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00
CASE-FT-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
ADPT-AUD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	14.95
ADPT-SCSI-EZTW	EZTwr SCSI adpt 50cm 2xCent50F, 1xIDC50F	14.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95
CAB-SER-SSQ	9pDM->9pDF SurfSq EZTwr ser extn cab 50cm	9.95

SVGA Monitors - require SD and/or FF to use all Amiga modes

MON-14-28	14" dig SVGA 0.28DP 1024x768@60Hz	89.95
MON-15-28	15" dig SVGA 0.28DP 1024x768@60Hz	119.95
MON-17-28	17" dig SVGA 0.28DP 1280x1024@60Hz	199.95
MON-17-.25	17" dig SVGA160MHz/0.25DP/1600x1280@75Hz Diamondtron	399.95
ADPT-MON-SEFF	EZVGA-SE ext flickerfixer purch w/ monitor	85.00
ADPT-MON-M2SD	EZVGA-Mk2 ext s/dblr u/g'able purch w/ monitor	65.00
ADPT-MON-PLFF	EZVGA-Plus ext flickerfixer purch w/ monitor	90.00
ADPT-MON-INSD	EZ-VGA internal s/doubler purch w/ monitor	45.00
ADPT-MON-INSD2	EZ-VGA internal s/doubler purch w/ monitor for BMON	55.00
ADPT-MON-INFF	EZ-VGA internal f/fixer purch w/ monitor	65.00
ADPT-MON-INFF2	EZ-VGA internal f/fixer purch w/ monitor for BMON	75.00

Digital Cameras and Amiga Digital Camera Software

DVR-CAM-CAS	CamControl s/w for Casio QV10/100/300/700	29.95
DVR-CAM-FUJ	CamControl s/w for Fuji DS5/DS7 /DX7/DX9	29.95
DVR-CAM-KOD	CamControl s/w for Kodak DC20/DC25	29.95
DVR-CAM-MIN	CamControl s/w for Minolta Dimage V	29.95
INT-12I-PTJR-SP	PortJnr hi-speed ser i/f pur with CamControl s/w	29.95

Application Software & Drivers

ASW-MM400	Scala MM400 on CD	59.95
ASW-MM400-UG	Scala MM400 on CD with u/g from MM300	39.95
DVR-TBPR7	TurboPrint 7.x Amiga printer driver (English)	38.95
DVR-TB6/7-UG	TurboPrint 6.x to 7.x upgrade (send TB6 disk with order)	19.95
DVR-TB7-703UD	TurboPrint 7 to 7.03 upgrade	5.00

Amiga Image Conversion/Effects Software, Scanner Software, Scanner Bundles and Adapters

SCN-FBA4-BDL3	UMAX award-winning SCSI A4FB scanner with PScope	179.95
DVR-SQ4	ScanQuix4 + 1 driver (Epson/HP/Artec)	59.95
DVR-SQ4-U	ScanQuix4 + 1 driver (UMAX)	74.95
DVR-SQ4-UG	ScanQuix3 to SQ4 upgrade (trade-in & receipt reqd)	29.95
DVR-PHS	PhotoScope UMAX-SCSI Amiga Scanner Driver	59.95
ASW-UCV4	Ultraconv 4 Graphics, animation & effects Amiga s/ware	39.95
ASW-UCV4-SP	Ultraconv 4 Graphics s/w etc purchased with ScanQuix4	29.95
CAB-SCS-25D/50C-S	SCSI cable DB25-M -> Cent50-M 1m with scanner	5.00
CAB-SCS-25D/25D-S	SCSI cable DB25M-DB25M mac type pur with scanner	5.00
CAB-SCS-50C/50C-S	SCSI cable Centr50M->Centr50M 1m pur w/scnr	5.00
CAB-SCS-50H/50C-S	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC pur w/scnr	10.00
CAB-SCS-50H/25D-S	SCSI-2 cable 50h/pDM->25D-M 1m for PPC pur w/scnr	10.00
ADPT-SCS-CSQR-SP	Classic Squirrel PCMCIA SCSI i/f 50pCM pur w/scnr	54.95
ACC-SCS-BLM4-SP	SCSI/Simm socket for Bliz 1230/50 Mk4 pur w/scnr	59.95
ADPT-SCS-50/50CF-SP	Centronics 50p-F to Centronics 50p-F (SQ) pur w/scnr	7.50
ADPT-SQ3-PAR	SQ3 adapter Epson scanner ->parallel port cable	9.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Hard & Floppy Drive, CDROM, LS120 & Zip Mech. & Cases

FDD-ITL-1200	Replacement A1200/600 int FDD 880KB	24.95
FDD-ITL-BARE	Bare 1.44/880 Sony FDD for tower (needs EZDF0/Catwsl)	19.95
FDD-ITL-D/C/I	Twr intl 880Kb FDD(Sony/EZDF0/cab bundle)	29.95
FDD-ITL-D/I	Twr intl 880Kb FDD (Sony/EZDF0) No cable	24.95
HD2-21	21MB 2.5" hard drive 90 days warranty	29.95
HD2-170	170MB 2.5" hard drive	49.95
HD2-260	260MB 2.5" hard drive	59.95
HD2-1.4	1.4GB 2.5" hard drive for Amiga	129.95
HD2-3.2	3.2GB ultra slim 2.5"drive, 9mm high (2 fit in std A1200)	169.95
HD2-4.1	4.1GB ultra slim 2.5"drive, 9mm high (2 fit in std A1200)	189.95
HD3-2.5	2.5GB 1"x3.5" IDE drive for tower	94.95
HD3-3.2	3.2GB 1"x3.5" IDE drive for tower	109.95
HD3-4.3	4.3GB 1"x3.5" IDE drive for tower	129.95
HD3-LS120	Panasonic LS120 Floppy/Optical 1.4/120MB	79.95
HD3-LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
HD3-ZIP-CT1	Single 100MB (nominal) Zip cartridge	14.95
HD3-ZIP-CT3	3-Pack of 100MB (nominal) Zip cartridges	29.95
HD3-ZIP-IDE	Bare ATAPI/IDE Zip drive internal	79.95
CAB44-CD-13C	44way (2.5" HD) cable sold with CD/HD 13cm	6.00
CASE-ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
CASE-HD-ECON	External 3.5" HD case no psu	19.95
CASE-HD-REM	Removable drive case for 3.5" HD (metal) no psu	24.95

Keyboards, Mice, PSU's, Misc. Hardware

FAN-60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.95
KBD-A1000	A1000 keyboard with 6-pin mini-Din cntr	39.95
KBD-A1200	Replacement A1200 k/b w/ribbon cable	24.95
KBD-A4000	A4000 keyboard with 6-pin mini-DIN plug	34.95
KBD-WIN95	Windows 95 keyboard with 5-pin AT DIN plug	12.95
MOU-WHI	Amiga Mouse	6.95
PSU-100	100w PSU for Amiga (fit your old lead - inc instrns,cntrs)	29.95
PSU-200	200w PSU for Amiga (fit your old lead - inc instrns,cntrs)	39.95
PSU-230	200/250w replacement PSU for MT/DT/FT	29.95
PSU-A1200	A1200 23W PSU (original) 90 days warranty	19.95
SPK-60W-INT	5.25" Bay Internal mounting 60W PMPO speakers/amp	24.95
SPK-240W	240W PMPO speakers w/ PSU 3.5mm jack, AC mains PSU	24.95
SPK-600W	600W PMPO AC/mains spkrs w/ subwoofer	49.95

Accelerators: PowerPC with 680x0 Co-processor

ADPT-VGA-BV8M-SP	BVision 8MB A1200 gfx card pur w/ PPC acc	139.95
ACC-PPC-16-4025	Bliz'd PPC603/160MHz+040/25/FPU/ no SCSI	199.95
ACC-PPC-16-6050	Bliz'd PPC603/160MHz+060/50/FPU no SCSI	479.95
ACC-PPC-24-4025	Bliz'd PPC603/240MHz+040/25/FPU/ no SCSI	319.95
ACC-PPC-24-6050	Bliz'd PPC603/240MHz+060/50/FPU no SCSI	549.95
ACC-PPC-16S-4025	Bliz'd PPC603/160MHz+040/25/FPU/SCSI-2	268.95
ACC-PPC-16S-6050	Bliz'd PPC603/160MHz+060/50/FPU/SCSI-2	548.95
ACC-PPC-24S-4025	Bliz'd PPC603/240MHz+040/25/FPU/SCSI-2	388.95
ACC-PPC-24S-6050	Bliz'd PPC603/240MHz+060/50/FPU/SCSI-2	618.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95

Accelerators: Apollo 680xx

ACC-060-75LC	Apollo '060 MMU 77MHz A1200 acc (lim avail)	299.95
ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	349.95
ACC-060-50	Apollo '060 MMU/FPU 50MHz A1200 acc (lim avail)	267.95
ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	184.95
ACC-040-40-SE	Apollo '040 MMU/FPU 40MHz A1200 accel (20% o/c)	164.95
ACC-040-28	Apollo '040 MMU/FPU 28MHz A1200 accel	124.95
ACC-030-40-1S	Apollo '030 MMU/FPU 40MHz A1200 accel 1 simm skt	59.95
ACC-030-40-2S	Apollo '030 MMU/FPU 40MHz 2 simm skt	69.95
ACC-4/60-SSKT	Apollo 1240/60 2nd simm socket & fitting	20.00

Memory: Simms, Zip RAM & FPU's - Please ring for latest prices

MEM-32MB-72P	72 pin 32 MB 32 bit simm for Amiga (+£10 for single sided)	69.95
MEM-16MB-72P	72 pin 16MB 32 bit simm for Amiga	39.95
MEM-8MB-72P	72 pin 8MB 32 bit simm for Amiga	24.95
MEM-4MB-72P	72 pin 4MB 32 bit simm 70 ns	14.95

WB Disks, Kickstart ROMS, Manuals etc

SYS-WB30-DSK	Amiga WB3.0 disks/s + Eyetech HD install	9.95
SYS-WB31-DSK	Amiga Workbench 3.1 disks x6 (w/ HD inst)	14.95
SYS-KS31-ROM	A1200 Kickstart 3.1 ROM chips (2 chips)	29.95
SYS-KS31-SET	A1200 K/s 3.1 ROMs & WB3.1 dsks6 (no manuals)	36.95
SYS-KS31-MPUG	A1200 Mag Pk u/g 3.1ROMs,WB3.1appln s/w, manuals	49.95

EZPC-Tower & Siamese Systems & Components

EZPC-SLE-CF1	EZPC SiSys RTG2.1entry level system	599.95
EZPC-HSE-CF1	EZPC SiSys RTG2.5 system Home Studio Edition	999.95
EZPC-DVE-CF1	EZPC SiSys RTG2.5 system Digital Video Edition	1369.95
EZPC-XLS-CF1	EZPC SiSys RTG2.5 system - ultimate Amiga expansion	1999.95
EZPC-AMP-CF1	A1200 Magic Pack/24x/3.2GB/etc EZPC-Tower upgrade	399.95
EZPC-SLE-CF1-UG	EZPC SiSys RTG2.1entry level (no EZTWR/kb/adpt)	499.95
PSW-W9X/SS	Windows 9x & Lotus SmartSuite bundle	99.95
SYS-SIA-ETH	Siamese System2.5, EZPC, Amiga ethernet	169.95
SYS-SIA-R25	Siamese System software RTG v2.5	99.95
SYS-SIA-R21	Siamese serial s/w RTG v2.1 (ref'ble agnst v2.5)	19.95
SYS-TCP-MIA	Miami TCP/IP stack for Amiga (req'n fee paid)	24.95

CD32, SX32 & Accessories

ADPT-KBD-SX32P	SX32 Pro PC k/b adapter cable 10cm	9.95
CD32-JOY	CD32/SX32 joypad	9.95
CD32-PAL	CD32 console with 18Wpsu/joypad/RF lead	149.95
SX32-MK2	SX32 Mk2 Ram/Clock/FPU expander for CD32	149.95
SX32-P40EC	SX32 Pro 030EC/40MHz Acc/Ram/Clk/FPU to 64MB	199.95
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A1200 Magic Packs, Accessories and Upgrade Bundles

AMP-STR-FDD	A1200 Starter Magic pack FDD vers /w s/w	179.95
AMP-STR-HD2	A1200 Starter Magic pack w/170 HD, EZCD i/f, skt & s/w	248.95
AMU-STH2-CDUG	24 x CDROM upgrade for AMP-STR-HD2 w/PSU	59.95
AMU-PRO-LS120	LS120 120/1.44/0.72MB drive ug w/PRO-PK3	74.95
AMT-LE	FDD Magic Pack in EZTower	299.95
AMT-PS4	EZTower PS/4, 24xCD, 3.2, 030/40, MMU, FPU, 8mb	549.95
AMT-PS4-XLS	EZTower PS/4XLS, 3.2, 040/28, 240w speakers	669.95
AMT-SE	EZTower SE,32xCD,3.2,LS120,040/28,16mb,EZVGA,15" Mon,240w spkrs	999.95
AMT-SE-XLS	EZTower SE-XLS, as AMT-SE w/17"Mon, Prel12TW, CDRW, 600w spkrs	1799.95
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PT-MBD-1200	Replacement A1200 m/b w/VID & RST fixes (no ROMs)	129.95
PT-EXT-PLCC	PLCC extractor tool for 040/EXT FPU	9.95
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PT-DTM-14	14-range digital test meter V, I, R, battery, diode tests	12.95
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FIT-EZ-XTRA	Fitting/testing per customer-supplied periph into EZTwr	7.50
REP-AM-2B/1D4	A1200 m/b rev 2B or 1D4 manfact'g bus timing fault fix	30.00
REP-AM-PCMRST	A1200 motherboard CC_RESET manfacturing fault fix	30.00
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THE WORLD OF AMIGA '99

Kensington Town Hall (opposite Kensington tube station), London

July 24th and 25th, 1999



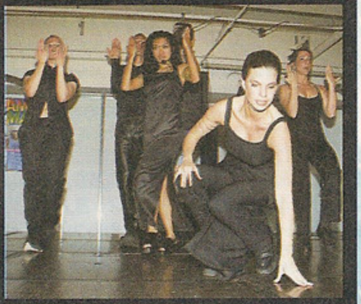
Come to Kensington Town Hall for this year's exciting World of Amiga show! Amiga Inc. will be there, as will a host of familiar Amiga dealers and developers. Try out the Internet in our Cybercafé, get gaming against other Amiga users, register Shareware there and then and loads, loads more!

The show is open from 10am-5pm Saturday and from 10am-2pm Sunday. Tickets cost £7.50 for adults and £5.00 for children.

☎ 01369 708004 for details.

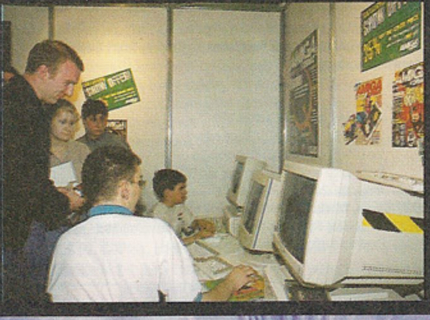












SCREENPLAY

The latest games, hints and some clever programming from you!



Another month in the Amiga games world and yet again nothing new or exciting... But hold on a second! Isn't that underground *Doom*-alike blaster that Ben's playing actually rather good? As in Amiga Format Gold Award good?! Yes, the first port of *Hexen* dropped into our eager mitts this month and we were blown away by it. But not as blown away as the monsters in it were...

There's also sneak peeks at the upcoming new releases, with the rather bad news about *Settlers 2* countered by two very impressive-looking new titles. Along with the usual mixed bag of your own homemade programs, it's actually not that bad a month for games at all...

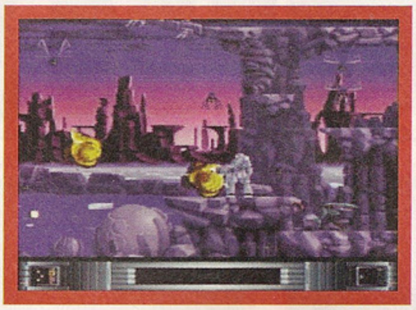
Mark Wheatley

AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

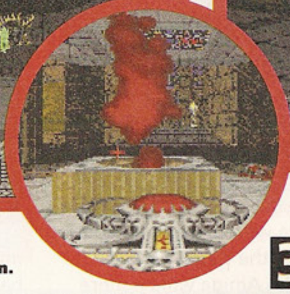
90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws they're not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.



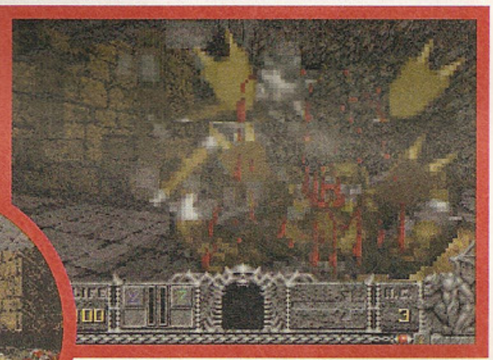


ACSYS (above left) is very much in the Turrican mold, while Phoenix (above right) is inspired by Elite.





There's a great choice of weapons and really varied gameplay in Hexen.



Death in close up is always messy, but more so with Hexen's graphical limitations.



Monkey Island-style shenanigans abound in Legend of the Elves.





Quake signs are a dead giveaway for secret areas, but we show you how to all of them.

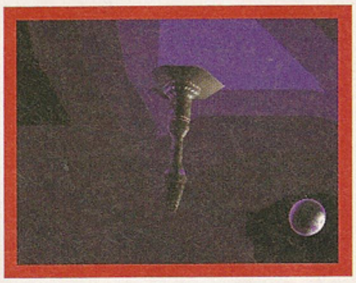
Previews

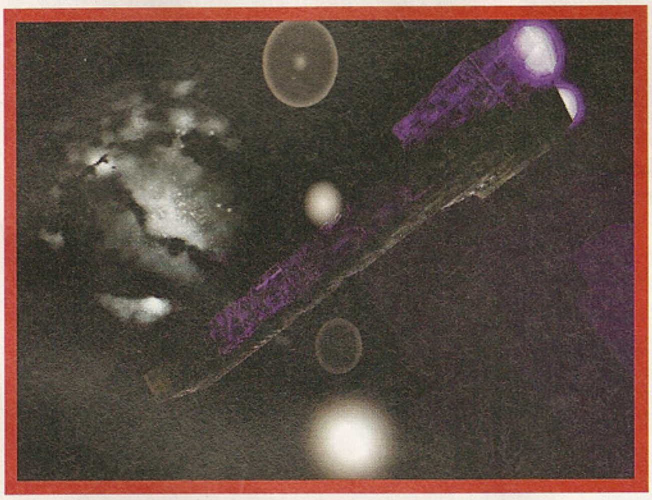


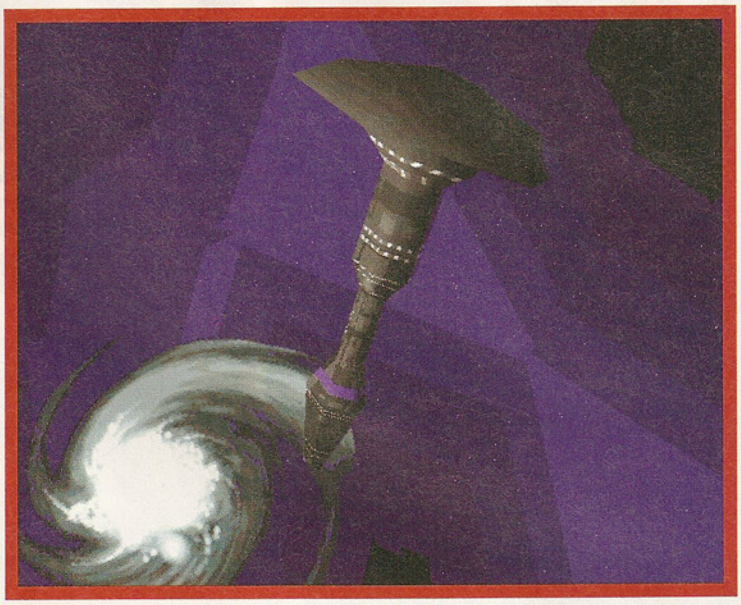



Richard Drummond proves that Amiga game development is still alive and kicking with a look at some forthcoming releases.

Phoenix







White swirly-thing alert, Captain!



The swirling thing's getting closer, Captain.

Not to be confused with Bitwise's *Thrust*-inspired *Phoenix Fighters*, *Phoenix* from Future Tales is a 3D space combat/adventure extravaganza with more than a nod and a wink to the classic *Elite*. It seems that the Amiga will be more than well catered for in this genre with the promised *Lambda* and *Explorer 2260* as well.

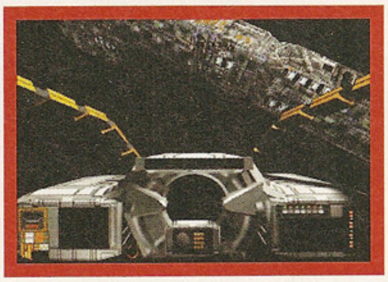
Details of *Phoenix*'s 3D engine specifications are mouth watering: multiple dynamic light sources, background fog, real-time lens flares, missile trails, animated textures, engine glow, debris, shockwaves, etc. Of course, this level of detail exacts a heavy hardware toll. Minimum requirements will be a 68040/40Mhz with an '060 being recommended.

Thankfully, the game will also support PPC accelerators and 3D hardware, so gamers with high-end machines can get blazing game speeds.

Phoenix will be distributed by APC & TCP. More details can be found at the Future Tales website: http://members.tripod.de/FutureTales/



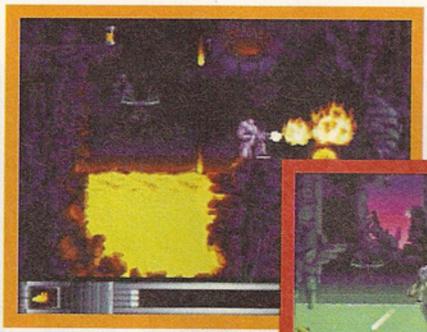
In space, no-one can hear you finish a sente...



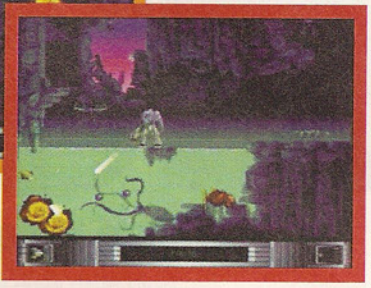


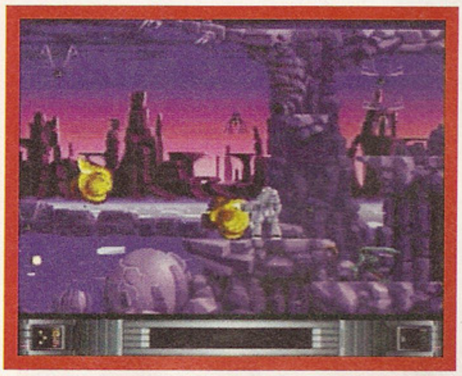
Phoenix looks like it will be following in the tradition of the epic space opera.

ACSYS



Who wants to have a bit of toasted bad guy for breakfast?



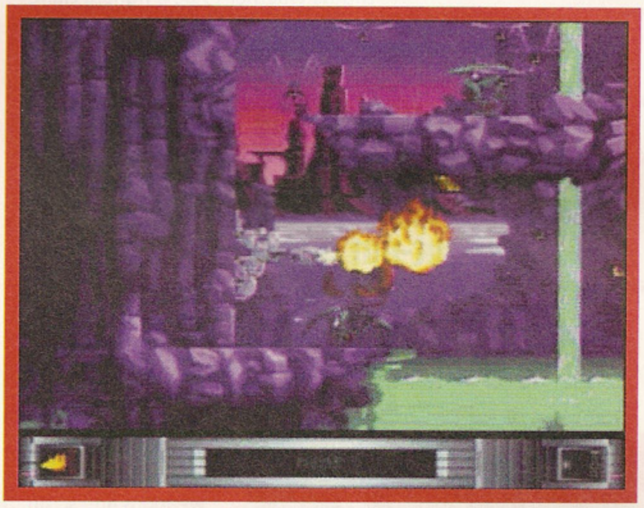


The unpronounceably-titled *ACSYS* from Unique was announced way back in 1997. News on the project has been non-existent recently, but development of the game is continuing. *ACSYS* is a platform shoot-em-up firmly in the mold of *Turrican*.

The setting for ACSYS – welcome to purple world.

ACSYS gameplay will consist of three distinct modes of level and boasts features such as full-screen, 50fps graphics, shooting in 360° and intelligent enemies. Minimum hardware requirements will be an '030-equipped AGA Amiga, 4Mb fast RAM and a 4x CD-ROM drive. For further details, see: http://www.rz.tuilmenau.de/~sobotta/acsys.html





Unique's Turrican-beater (hopefully!) in action. Make sure you watch out for the flames...

Settlers 2 in doubt

Rumours are circulating that the in-progress Amiga port of Blue Byte's god game, *Settlers 2*, has been cancelled. Titan Computer, who were producing the Amiga version, had apparently completed porting the game engine, needing only the graphics and audio to be supplied, but Blue Byte balked and refused to even sign the licence agreement.

A campaign has been launched by disappointed Amigans in an attempt to get Blue Byte and Titan to resolve their differences. If you don't want to see all of Titan's hard work go to waste, visit the campaign website at this address: http://www.angusm.demon.co.uk/AGDB/Sett2.html and show your support for the project. AF

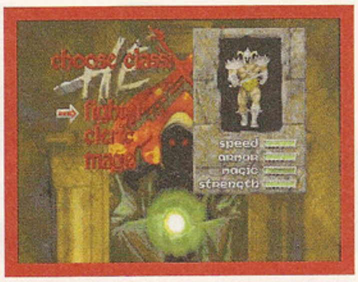




Settlers 2 running on a PC. Will we ever see an Amiga version?

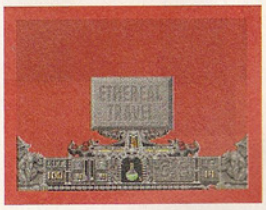
Hexen

Ben Vost trawls the magical depths of Hexen.





Choose a warrior, any warrior.



The words "Ethereal Travel" just mask loading time.

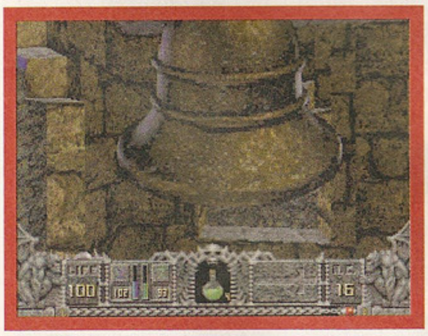
The latest free source game to be released, *Hexen* uses the *Doom* engine, but it's a far better game which has more in common with games like *Tomb Raider* than the simple shoot-em-up that *Doom* is.

There are trappings of D&D-style RPGery, including the fact that you choose whether to be a fighter, cleric or mage at the start of the game, with the obvious strengths and weaknesses

> **The weapons are more imaginative than Doom and overall it seems to be a better thought-out game.**



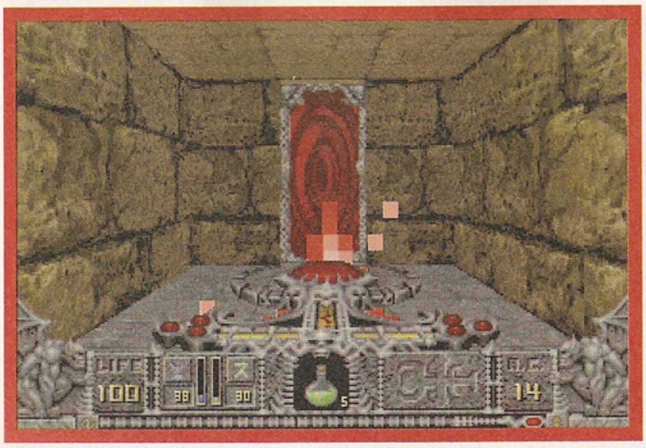
familiar to us all from a lifetime of such games. You collect mana and potions, and while the RPG stuff is more Tunnels and Trolls than D&D, it certainly adds up as you improve your armour class, weapons and so on.



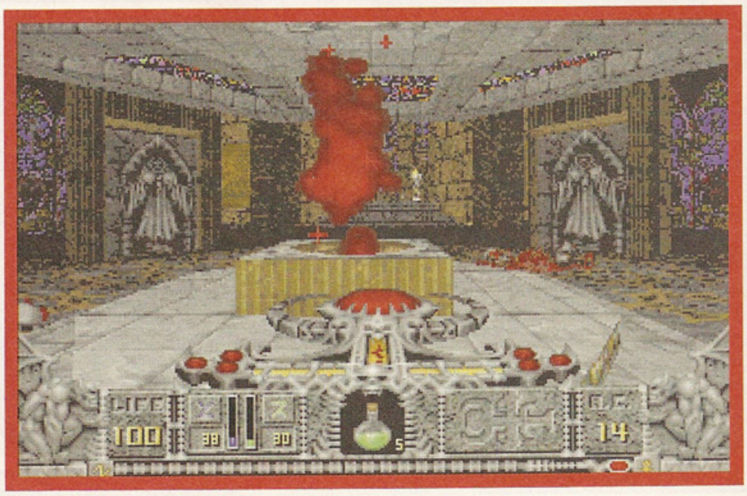
The version of *Hexen* I played was the *Hexen_68K* port by Christian Sauer (v0.45) which allows for mouse play, sound and music, but there are ports to suit PPC boards (both WarpUp and PowerUp flavours) too. In any case, the requirements are slightly more stringent than for *Doom* since there's a lot more going on in *Hexen*. For example, it allows you to look up and down and there are a lot more peripheral features, such as leaves blowing in the wind, for the game to keep track of.

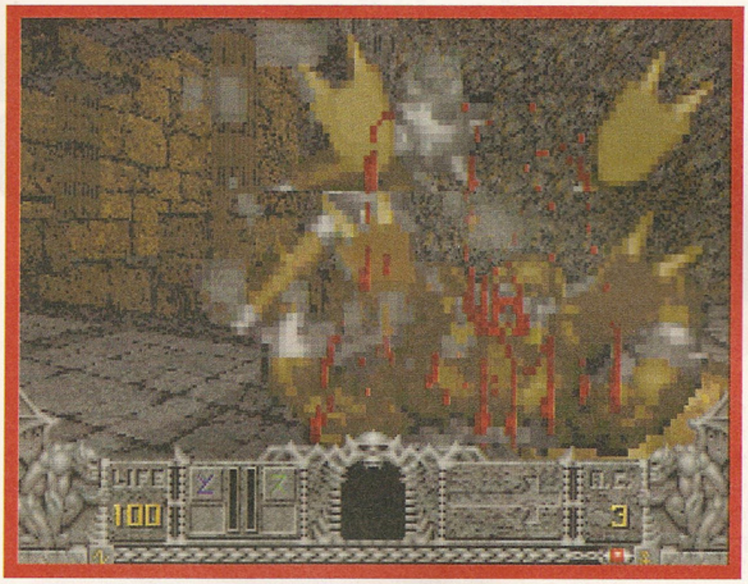
The game itself is a lot more colourful than *Doom*, and although it sticks to the messy sprite look of its parent game, the monsters seem better-defined too. Of course, once you've got used to the true 3D of *Quake*, it's hard to go back to the pseudo-3D of games like *Doom* and *Hexen*, but because they move a lot faster and are more colourful, it means the games can often have more depth, and this is certainly true here. There are falling rocks, puzzles galore, resources you need to conserve if you're using them for weapons, plus weapons that do different things depending on which class you are, and so on.

The idea of the game is fairly *Doom*-like. Wander through the levels pulling switches and pushing



Banging on the bell is a nice touch for the end of the first level, and the red things signify portals for ethereal travel.





Sprite-based baddies do get a bit messy close up.

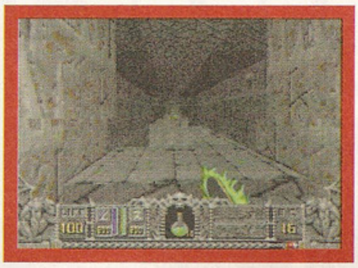
buttons, shooting the bad guys. There aren't as many weapons per character as there are in *Doom*, but the ones you find are pretty good fun, particularly the cleric's big weapon which fires out the souls of the dead to rend apart the bad guys.

The only problem with the game is its poor keyboard control which you can't remap. The keys chosen are in awkward places. For instance, the fire control is CTRL, but the run and sidestep modifiers can only be reached from the right shift and alt keys respectively, making it very awkward to strafe as you run.

I'm pretty sure this is a limitation of the PC original as it's not something that can be changed by any of the porters (except presumably by remapping the raw key codes), but it still makes the game more difficult to play than it should be.

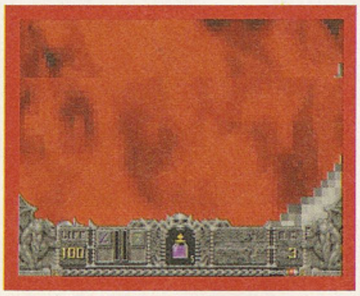
Other than that, the weapons are more imaginative than *Doom*, the storyline's more involved and overall it seems to be a better thought-out game. It doesn't have the extensibility that *Doom* has, but it's great fun nonetheless.







The graphics are a lot more varied than those in Doom.





Weapons galore

You get the chance to have four different weapons per character for a total of twelve different means of beating up baddies. They are as follows:

Warrior

FISTICUFFS: All you start with, and it take ages to beat someone, or something, up. The *Hexen* equivalent of an axe in *Doom*.

AXE: A hefty axe which glows when you have blue mana. It still does damage if you don't, but not as much.

HAMMER: If your enemy is at range this will fire out mini explosive hammers which seem to do a lot of damage. If they're up close, this hammer either hits them in much the same way that a toffee hammer would, or it really clouts them.

RUNESWORD: Groovy! The kind of weapon you wait ages for. It fires out five fireballs for distance-bashing and is still a swordy kind of implement when the baddies are close by.

Cleric

MACE: The cleric's starting weapon. Looks meaty, but does about as much damage as the warrior's bare knuckles.

SERPENT STAFF: The *Hexen* equivalent of a machine gun, this chucks out fireballs pretty swiftly.

BURNY HANDS: Share the flames around with a mystical gesture and you can set everyone else on fire. This is slooooow, though.

WRAITHVERGE: Absolutely the best weapon in the game as far as I'm concerned. This fires out ghosties which seek out lifeforms and chomp them up.

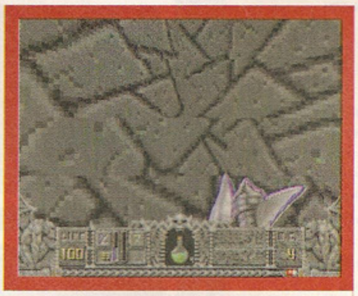
Mage

BLUE DIAMOND STAFF: It spits out little bits of fire. On a par with the other characters' first weapons.

FROSTY HANDS: This one spits out loads of bits of ice and can freeze your enemas. Sorry, enemies.

ELECTRIC HANDS: This one shoots a bolt of lightning from your fingertips. It doesn't move very fast so it's fun to watch the baddies trying to make a run for it with this after them.

RED STONE STAFF: Three fireballs. Auto-aim. Nasty, but what did you expect for a wizard's top weapon?



AVAILABLE FROM: Alive mediasoft (01623) 467579

REQUIRES: Requirements vary, but at least '030/25MHz and 8Mb RAM

PRICE: £15

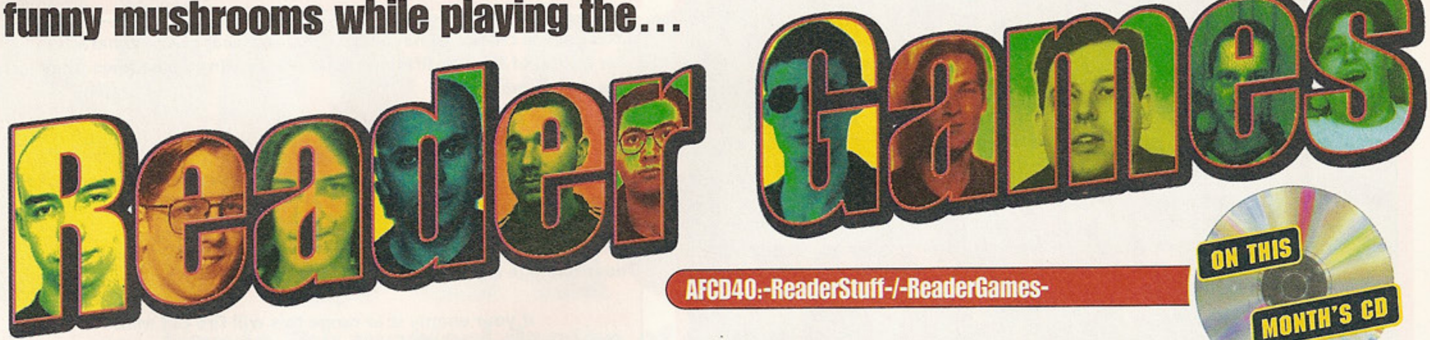
Pros and Cons

+ Great gameplay.
+ Lovely graphics and sound.
+ Three characters to choose from.
- Bad keyboard layout.

OVERALL VERDICT:
A superb 2.5D game which is much better than Doom.

90%

Elves, bats and caterpillars? Mark Wheatley should avoid those funny mushrooms while playing the...



Reader Games

ON THIS MONTH'S CD

AFCD40:-ReaderStuff-/-ReaderGames-

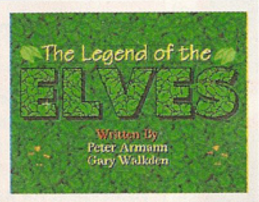
And they're magic too, with adventuring, arcade action and shoot-em-up blasting this month. Although, as usual, there's plenty that could be improved upon, and here's your first stop for advice.

Not only do we offer tips on how to improve your games, we mercilessly slag them off too and... no, hang on. Although we may do that in exceptional circumstances, we're here to encourage you to develop your game writing skills and to basically bribe you by offering a lovely fifty quid to the best game of the month. We may also be bringing you some game writing tutorials in the coming months, if enough of you are interested.

Let us know if you are and what you'd like to brush up on and we'll see what we can do. Anyway, on with the games...

Game of the Month £50 Winner!

Legend of the Elves





This is a pretty accomplished adventure game, with it's tongue firmly lodged in its cheek. 'Hmm,' you may be thinking, 'It sounds suspiciously like *Monkey Island*.' Well you'd be right, but it's nice to see someone taking such a fantastic game as an influence (well, to rip off, really), as opposed to the usual sack full of *Breakout* clones we normally receive.

Anyway, the plot. You're an elf and on returning home you discover that your family has been kidnapped by Evil E. Witch, your typical gnarly crone who cackles a lot. After listening to your character sobbingly explain how much he loves his ole mum, dad 'n' sibling, you have to set off to raise the ransom in order to rescue them.

The control system is typical of point and click adventures. If your mouse moves over an item you can interact with, it's highlighted and you can then look at, pick up, use, talk to, etc. The conversations are very much in the *Monkey Island* style of humour and there's a fair selection of characters to talk to, from the shoeless tramp, the





The village is a good place to meet people. Don't buy the beans, though.



Fishing in the moonlight – you never know what you might find...

READER WARRANT

When you're sending in your submissions make sure you also give us:
1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.
The address to send your stuff into is:
Reader Games • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW
Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

In respect of all material which forms my reader contribution to Future Publishing's *Amiga Format*, I hereby warrant that:-
1. The material is original and does not infringe any other material or rights;
2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
3. That there are no legal claims against the material provided;
4. That I have full power and authority to provide this material to Future Publishing.

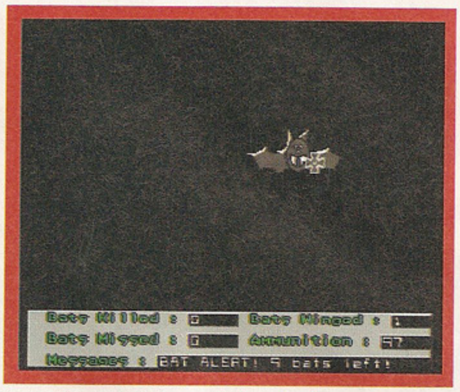
Signature: ______________________

Ozz Feast

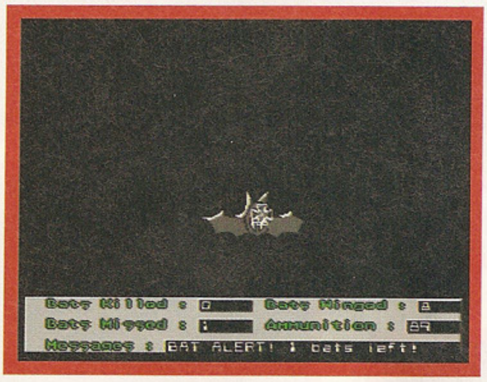
This is another mad effort from the author of *Snake Wars* (*AF120*), the game where you had to drive injured soldier snakes to a snake hospital. As you do. Anyway, the plot behind *Ozz Feast*, in case you couldn't guess, is to wing bats. Not shoot them dead, but just wing them so they'll fall to the floor, from where heavy metal legend Ozzy Osbourne can bite their heads off. Now some may see these ideas as the work of genius, and I know I normally encourage people to spend weeks slaving over their efforts, but Sam, I really think you should be getting out a bit more...

On to the game then. You have a crosshair on the screen which is moved by the mouse and at irregular intervals a bat will appear. Move the crosshair onto the wing of a bat and shoot it. Blast its head and you'll be restarting the level. Unfortunately, if you also miss any bats you get to restart the level too.





Wing the bat and you score points, but really, it's not that much fun.



Don't shoot it in the head or you'll be restarting the level.

Although the various screenshots don't show it, we didn't get past level one. The reason, and for once it's not because we're inept, is because the bats appear for a random length of time, and some just appear for a second. If you randomly spray the screen with bullets you might stand a chance of winging these bats but you're also likely to shoot them dead. Restart.

The game is that simple, and unfortunately it's also that dull. Why not spend your time looking at the website for the Bat Conservation Trust (http://www.bats.org.uk) instead – you'll find that it's a much more interesting way to spend your time.

AUTHOR: Samuel Brookes
LANGUAGE: Amos
VERDICT: It works, but it's frustrating, too limited in gameplay and too dull to keep you playing for long.

policeman at the fair and the woman at the post office with the nice jumper and the mad cat from Hell. And remember that it's not big or clever to try to pick up rich men...

It'll take a bit of exploration before you start to get any idea of what you should be doing, but the game map isn't intimidatingly huge and it's fun to interact with the people and animals you find along the way. It's also not too tricky to start piecing together the little puzzles and working out who needs what, and as such it's very easy to get sucked into the game.

I won't spoil the ending for you (nothing to do with the fact that we're stuck in a cellar with some ale, a key, some string and other bits and bobs with no idea of how to get out, oh no), I'll just recommend that you boot this up, get adventuring and have a laugh at the same time.

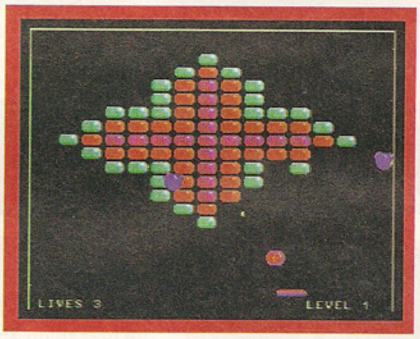
The game was originally going to be in two parts, with the second taking place on another island, but development ceased after this first part. If enough people like it and write in to tell us, maybe we can persuade Peter to code part two. Hopefully this month's well-deserved Reader Games £50 prize will help him consider it too.

Legends of the Elves also has its own website under construction at http://members.aol.com/EricElf/.

AUTHOR: Peter Armann
LANGUAGE: Amos Pro
VERDICT: If you liked *Monkey Island 1* and *2* (and if you didn't, what's wrong with you?!), you'll like this as it's more of the same.

Squares & Megabounce

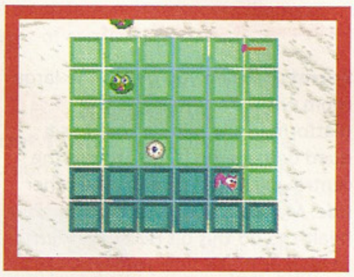
Oh come on, please! Every Amiga owner on the planet must have *Breakout* clones coming out of their ears by now! Fair enough, *Megabounce* is bright, has a good selection of bonuses, works well and is quite fun, but we've seen it a hundred times before. You'll see better versions than this, and much worse ones too, but can't we have some games that are original instead?

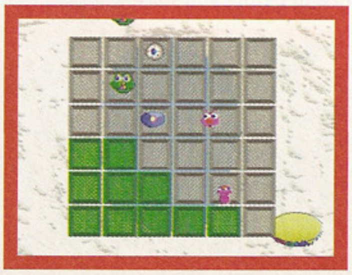


There's a good selection of bonuses to be collected in Megabounce.

Squares then.

This is a *Crazy Painter* clone and, like *Megabounce*, it's bright, simple and quite fun. You have to move your caterpillar round a grid and every square you pass over will change colour. Move over the whole grid and you get onto the next level. Beware of the floating, fiendish frogs who wander around the grid and keep your eyes open for the occasional bonus, plus helpful items like trampolines that can bounce you up to the top of the screen.

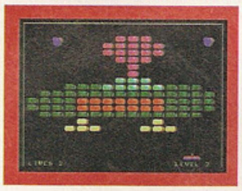


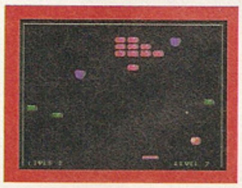


Colour in the squares, avoiding the bad guys.

Mark is obviously a pretty proficient programmer with a good idea of what makes a game addictive and enjoyable, as these two efforts show, but it would be much better to see something original. Even though the reader game winner this month is a straightforward clone, at least it's had some original thought put into it and it's not the sort of game we often receive here at AF Towers.

Squares and *Megabounce* are both fine examples of their type of game but you're unlikely to need more versions of them. And please, please, please, don't send any more *Breakout* clones!





Breakout. Again. Although it is quite a nice version, to be honest.

AUTHOR: M. Townsend
LANGUAGE: Amos
VERDICT: Both are good versions of classic games, but something original would really have been appreciated a lot more.

GAMEBUSTERS!

THE COMPLETE Quake SOLUTION PART 5

Ben Vost leads you through the second and harder half of Quake, finding all the secrets.

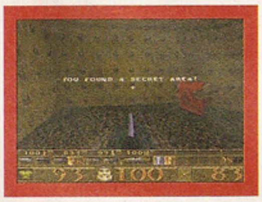
We left off last issue having finished two of *Quake*'s four chapters, and this time we're going to look at the latter half of last year's top Amiga game. Without further ado, let's press on, as Claire Rayner might say, and head straight into the action…

Episode 3:

Netherworld

1. Termination Central





Secret areas galore, and we explain how to get to them.

The best thing about this level is the fact that you can go through it picking off bad guys at a distance. Well, at least you can if you cheat and get all the weapons. With the shotgun alone it's not so easy and it's a bit of a waste of ammo too.

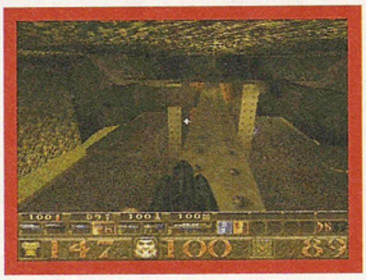
Anyway, what you want to know is where all those secrets are so you can get a perfect score…

Secret 1: Get to the bit where you come to a fork. To open the barrier on the fork to your right you need to press the button at the end of the passage, return to the left-hand fork and… wait a minute. Go back under the catwalk. There's a secret door to your right where there's also red armour.



Medical supplies and extra weapons are going to become even more important as you progress through the later levels.





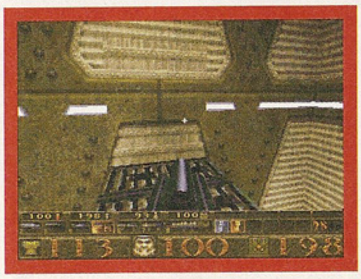
Be careful about dropping off raised platforms – it can really hurt.

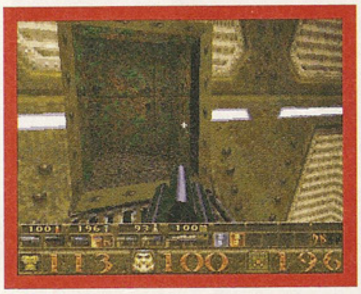
Secret 2: When you get to the large room with the catwalk to the platform in the middle that has a quad damage on it, go around the central pillar and dive off the other side. Make sure you've got enough health to do this bit because it hurts, so save or make sure you're at 100% health before you start.



There's a shady Quake symbol there…

Under the slime you'll go through a doorway into a big room with a slipgate. Get all the bits in the room before you go through and you'll be high up on a ledge with some green armour in front of you down a passage to the right. Kill the grunt in the passage and drop down to the big hall with the megahealth you

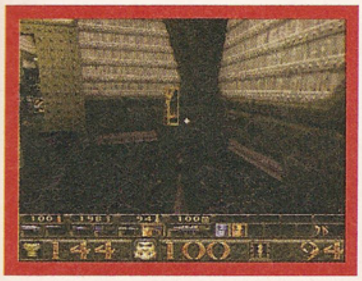




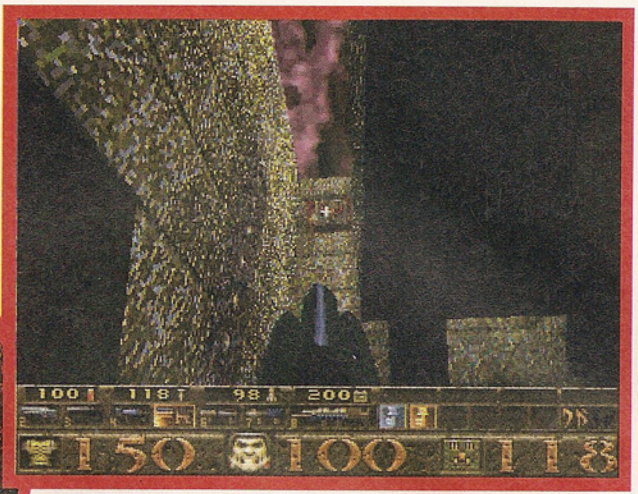
These out of the way places are good places to look for secret areas.

may have seen through the window at the start of the level. Now you should go through the slipgate opposite the megahealth.

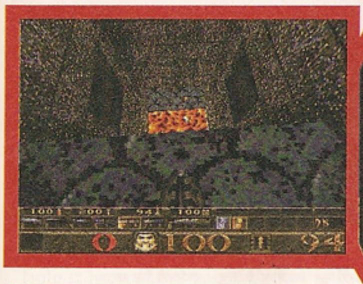
This puts you back in the passage where you got the green armour and killed the baddie, and if you return to where you first came from you'll see another slipgate. Going through it returns you to the main map.







Looks like it's going to rain, so you'd better hurry up and shoot that Quake symbol.







Be careful to avoid the lava and you'll find a secret area.

Secret 3: Head back to the room where you found the start of Secret 2. Go to the stairs on the left of the platform and look to the side and down. You should notice a ledge you can drop to, instead of into the slime. Do so and get the bits you'll find, then step on the elevator pad and go to the top of the room with more catwalks. You can get the health, etc, if you need it, then drop back onto the platform.



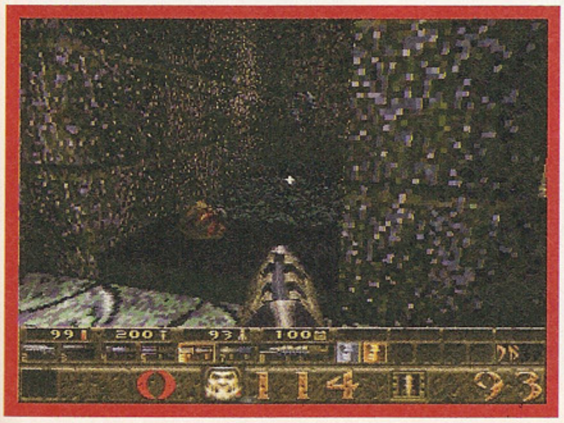
Secret 4: Just before the elevator pad that takes you up to the boxes on your right and the gold keycard on your left, step back a bit and look to your left. You'll see a ledge in the shadows that you can leap onto.

You can get a quad damage here, and then you can either try to leap back to the walkway or just drop off and get the elevator back to the walkway. In any case, the next secret's not far away...

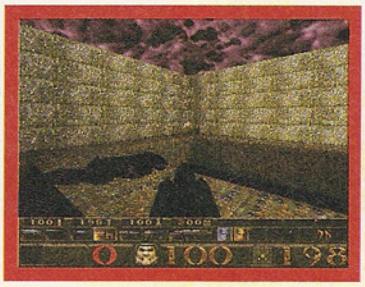
Secret 5: Go into the block of boxes and get to the top of it. If you turn left you should be facing a wall with some odd texturing. It should be fairly obvious, so if you can't see it you're probably facing the wrong wall. That'll get you a megahealth which will come in very handy over the next couple of corridors.

2. The Vaults of Zin

Secret 1: When you start this level you don't have the wherewithal to dispose of the horrible zombies, but never fear. Run past the first lot, turn left and look right. You'll see a grenade launcher, the answer to your violent prayers. Grab it and look down the shaft you've just leapt.



It's damp and gloomy – I think I just trod on a slug.



You'll see fire at the bottom and also a zombie or two. Let 'em have it in short order and then simply drop down the shaft. As long as you're pressing forward while you're falling you should end up on the floor rather than in the lava. Get the megahealth and ride the lift up to where you were before.

Extra secret: As you come down the stairs in the room with the pillar surrounded by lava, look to your right. You'll see a bit of wall that's lit up. Shoot it to reveal a quad damage and a zombie. I wouldn't bother with the Quad yet... By the way, this secret isn't in the secrets total at the end of the level – it's an extra one.

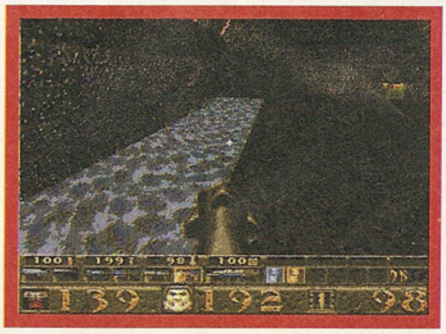
Secret 2: You'll eventually get to a bit with an ogre above you dropping grenades on your head, with a fiend in a pit below with a picture of a crucifixion on the wall. If you shoot to the right of the picture you'll hit a secret door that leads to a ring of shadows and a slipgate.





Seek out the secret areas for extra health and armour.

Continued overleaf ➡

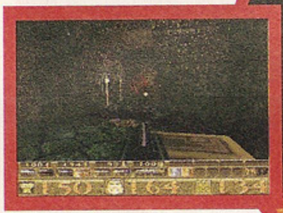




It's a bit dark but it looks like there should be some steps up that wall...



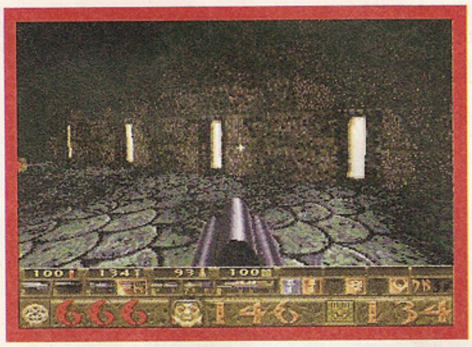
More secret areas than you can poke a spoon at. Unless you're skilled at spoonmanship.



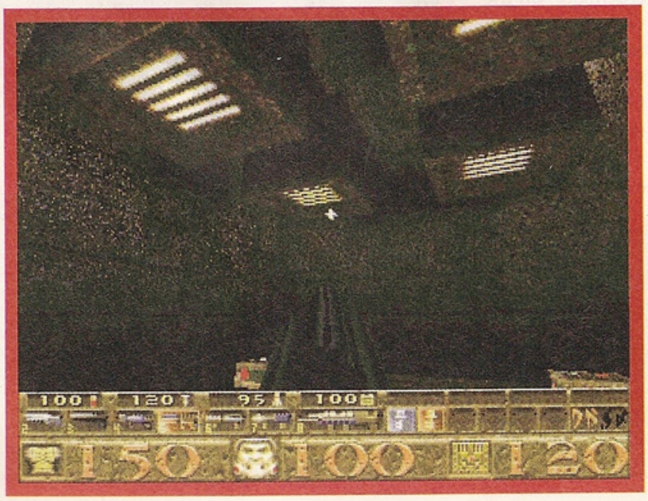


A secret area (right) with a huge amount of supplies for you to stock up with.

Secret 3: This one's pretty easy. After you've finished off the fiends you'll be in their room. Face the Quake tile, turn around and you'll see a discoloured area of wall. This takes you to a slipgate which leads you to the top of this building where the ogre was dropping grenades on your head. There are plenty of goodies here.



The light (below) looks like it might be worth a closer inspection.





3. The Tomb of Terror

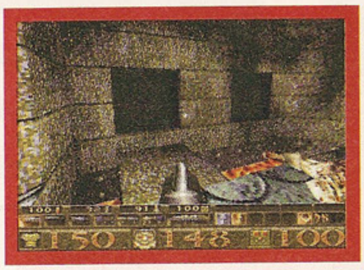
Secret 1: At the start of the level you'll go into a room that has a Quake tile that makes some steps rise from the lava. Go up them and then turn around 90° to your right and you should see a Quake tile up on the wall. Shoot it and then jump to the ledge that opens up. Go through the slipgate to get some red armour.

Secret 2: Back where you found Secret 1, go through the passageway killing zombies and deathknights and you'll come to a room with a gutter filled with water. Drop into it and walk forwards to get a megahealth.

4. Satan's Dark Delight

Secret 1: You'll get to a room with two ramps and some thunderbolt cells. If you descend one of the ramps to get in the room you'll see a Quake tile. Ignore it for a moment and go up the other ramp and look to your right. You'll see some blocks sticking out of the wall ever so slightly. You can walk up to them to get some goodies.

Secrets 2&3: When you're on the moving platforms in the tall room there's a bit where the platform goes around a pillar and there's an ogre under you guarding a couple of healths. Drop him, then drop down to the platform he was on and you'll reveal a secret area. There's a Quad damage inside, but if you really wanna get meaty, shoot all the rectangular lights to open up a further secret area containing a Pentagram of Protection.

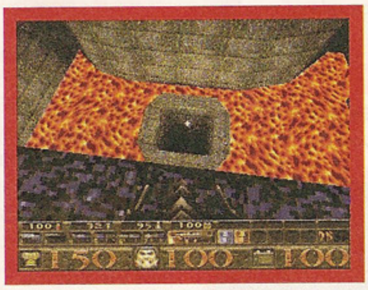




That Quake sign looks like it could be hiding something secret to me.

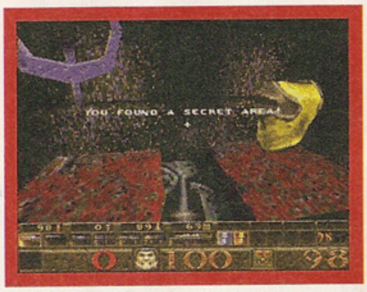
Secret 4: On getting the lift up to the room with the fiend and ogre, you'll notice that one of the ceiling lights is actually Secret Area 4, containing another Pentagram of Protection.

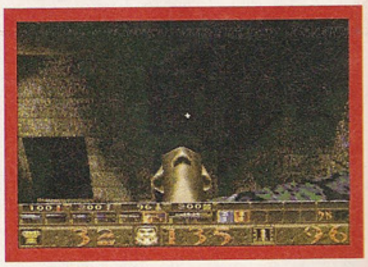
Secret 5: Not really a secret, but the way to get to a secret level: The Haunted Halls. Near the end of the level you can go down some stairs to where there's a thunderbolt just waiting for you, but a shambler appears. Take him out and then, instead of proceeding, look back at the stairs and you'll see a thin little ledge extending back under the stairs. Going along one of these you'll see a pit to your side and dropping into it will bring you to the slipgate for the secret level.





Top: Lava's bad, passageway's good. Above: extra health – that's good too.





Top: It's not a secret area any more, as we explain exactly how to get there.



A Pentagram of Protection always comes in handy.

Secret level: The Haunted Halls

Secret 1: After the room with loads of ogres there's a lift. Get on to make it go but get off again so it goes without you. Drop down into the hole it leaves and you'll be in the first secret area. Go through the slipgate and you'll find...

Secret 2: Secret 2 will be opposite you. It's the grill in the wall covered with blood. Shoot it and you can get a quad damage.

Secret 3: Near the end of the level, where you have a vore facing you across some lava and a Quake tile to your left, look up and you should also see a Quake tile on the ceiling. Shoot it and arm your grenade launcher. A door will open just to the left of the more visible Quake tile.
Bang a couple of grenades in there and be ready to chuck a couple more in if you haven't managed to kill the two zombies.

Secret 4: After you've got the bits in Secret 3, killed the vore, pressed the other Quake tile, lowered the barrier at the end of the walkway and gone up in the lift and killed the bad guys at the top, start crossing the walkway. Look to your right and you'll see the shadow of a doorway. Jump across to it and it'll open just as you reach it and it'll give you some more secrets.

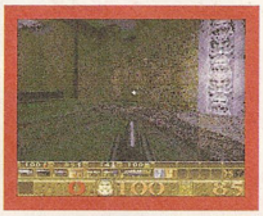


5. Wind Tunnels

Secret 1: After going up the second pipe you'll be bouncing on the air while shooting bad guys. Get off the air column and go up the stairs. There'll probably be several fiends waiting for you, but once you've got rid of them you'll see a hole in the corner of the hallway you're in. Drop through it to get to the nails and Secret Area 1.

Secret 2: Where the green armour is, just before you jump up the tube, drop down into the water, find a tunnel and swim up inside it. That should bring you to a room with nails and health.

Secret 3: In the big room after you've killed the shambler, you'll see that there's only a narrow ledge all round it. Go to the end of the ledge to your right and then turn around and have a look up. You should see the telltale Quake tile that'll open the secret door you need.





Red sky at night, shepherd's delight. But never mind sheep – find something to kill!



A cunningly hidden Quake tile that'll lead to treasure's unseen by human eye. Except for Ben's, of course.

Secret 4: Just before the exit slipgate there's a weird bit of floor. Shoot it to open a hole, but don't just drop in because you'll go straight through the secret room.

6. Chambers of Torment

Secret 1: Where you get the silver key, after you've killed the ogres, look up and you should see a Quake tile in the ceiling. Shoot it and one of the patterned columns will drop down, giving you access to that trellised-off area the ogres were in before. Beyond it there will be a quad damage, some nails and another Quake tile.

Secret 2: After you've killed the ogres on the girders above you (after the silver key door) and got on the lift, you'll see a Quake tile right above you. This opens a bit of wall so you can jump onto the girders where the ogres were and collect some ammo.

In the next issue we'll have the very last episode of *Quake* for you to go through, finding all the secrets on the way. We'll also try to get footage of them on the CD for you. AF







Secret area, secret box, secret stuff? Nope, just a load of nails. Drat.



If the ogres paid their electricity bill, maybe Quake wouldn't so gloomy...

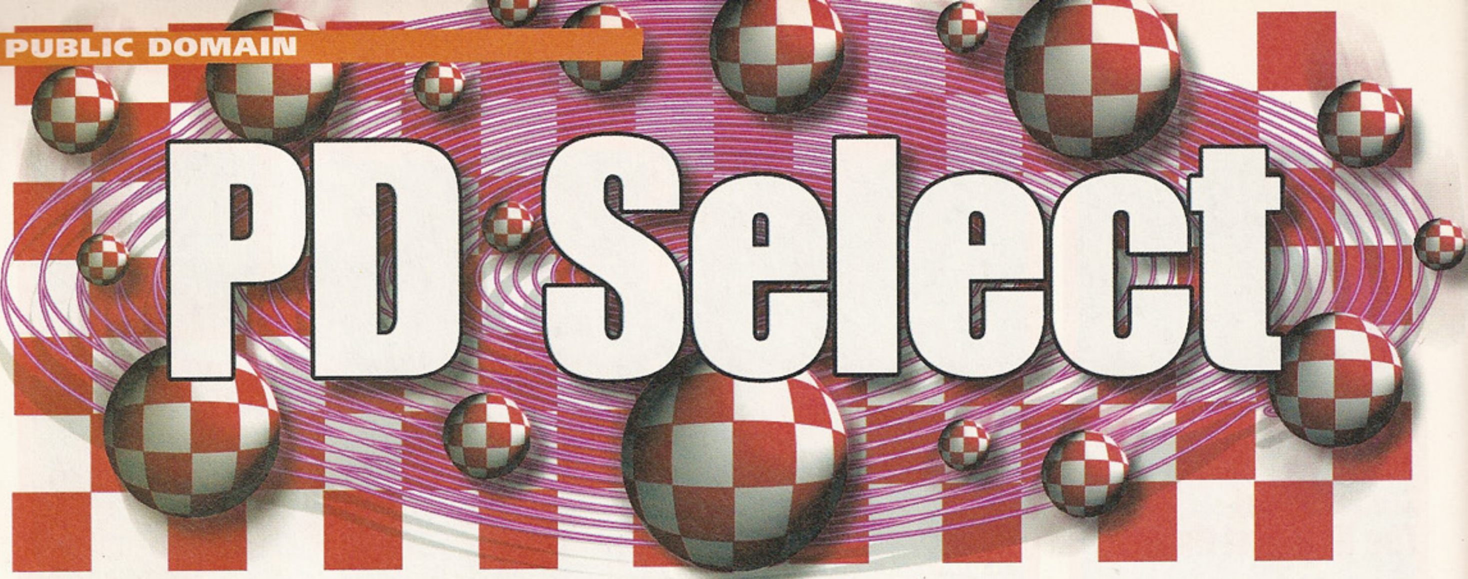
SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Napalm, Sixth Sense Investigations or whatever, then don't keep them to yourself – send them in so we can pass 'em on to other gamers out there who might be having more problems than you.

Also, if you've got a query about a game (and no, we don't really mind people asking about The Secret of Monkey Island), then drop us a line and we might be able to answer it in Helping Hands.

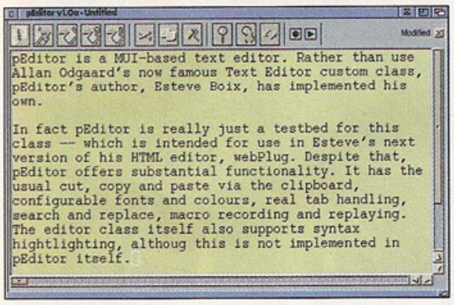
HELPING HANDS • Amiga Format 30 Monmouth Street • Bath • BA1 2BW



PD Select

Richard Drummond takes his first steps into the world of PD games and utilities in our new-look PD Select…

pEditor v1.0a



Text editors can be user-friendly too.

This is a *MUI*-based text editor. Rather than employ Allan Odgaard's now famous Text Editor custom class (as used by *YAM*, for instance), *pEditor*'s author has implemented his own. In fact, *pEditor* is really just a testbed for this class which is intended for use in the next version of his HTML editor, *webPlug*. Unfortunately, Esteve has no plans to turn his class into a standalone MCC. He definitely needs to be persuaded.

However, for all its preview status, *pEditor* offers substantial functionality. It has the usual cut, copy and paste of selected text via the system clipboard, dragging of selected text, configurable fonts and colours, real tab handling, automatic indenting, search and replace, plus macro recording and replaying. The editor class itself also supports syntax highlighting, although this isn't implemented in *pEditor* itself.

pEditor may only be a demo but it's a fast and friendly editor, ideal for knocking up quick pieces of text.

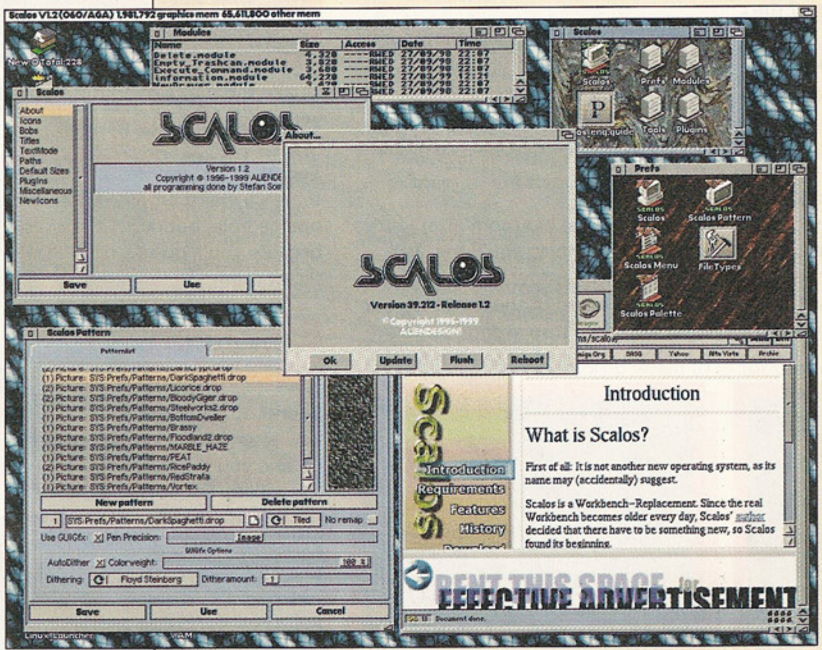
BY: Esteve Boix
WARE: Freeware
FROM AMINET: comm/www/pEditorv10a.lha
SIZE: 49K
REQUIRES: MUI

Scalos v1.2

When Workbench 3.5 finally does get released, I hope that one thing Amiga Inc. have managed to update is the desktop. I know that they plan *NewIcon* support, but much more is needed. However, if you don't want to wait for OS3.5 to arrive, one way to overhaul your Workbench right now is to install a desktop replacement. Alien Design's *Scalos* is just such an animal.

Scalos adds power and flexibility to your desktop. In fact, if you do try it and then go back to using a standard Workbench, you'll soon end up cursing in frustration. *Scalos* is streets ahead of Workbench and yet it retains almost 100% compatibility.

One big advantage afforded by *Scalos* is multi-threading, where each WB window is controlled by a separate task. This means you may perform operations simultaneously; for example, you can copy files between drawers of your hard drive and still browse the contents of a CD before the copy is finished. There are loads of other life-saving features, though.



Give your desktop a new lease of life with *Scalos*.

Scalos has, in no particular order, progress bars, configurable menus, built-in *NewIcon* support, custom BOB routines for icon-dragging, context-sensitive pop-up menus, more intelligent pen sharing, plug-in modules for easy expandability… the list goes on.

Revision 1.2 of *Scalos* corrects a few bugs from previous releases. Perhaps the single most important fix is that the location for a project icon's default tool is now searched for in the system's command path. The glaring omission of this feature previously meant that, for example, *Scalos* wouldn't function correctly with the *AFCDView* system provided on *Amiga Format* coverdiscs.

There are a few minor flaws with the *Scalos* distribution. The documentation is a bit thin for a start. Most of the *Scalos* GUI elements lack adequate keyboards short-cuts and the Prefs programs could really do with being re-designed, perhaps integrating some elements from the standard WB prefs. For instance, at the moment you need two programs to control the Workbench font and colour. There are also still a few bugs in *Scalos*'s plug-in default icon system.

Nevertheless, this is an excellent piece of software. It doesn't quite offer the power of *DOpus Magellan*, but it's cheaper and a lot easier to configure. With a Shareware fee of only £18, it really is a bargain. Go get a copy now and improve your Workbench.

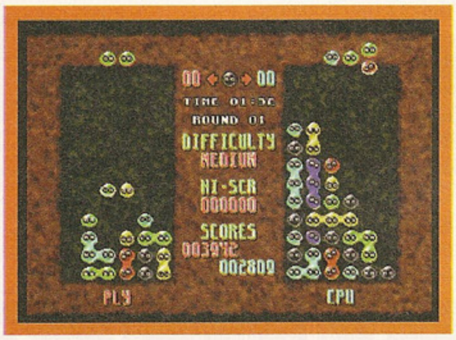
BY: AlienDesign
WARE: Shareware
FROM AMINET: util/wb/scalos.lha
SIZE: 533K

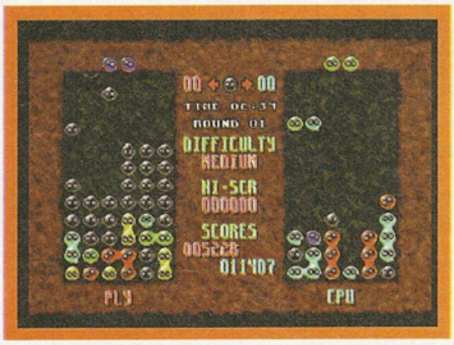
Outfall

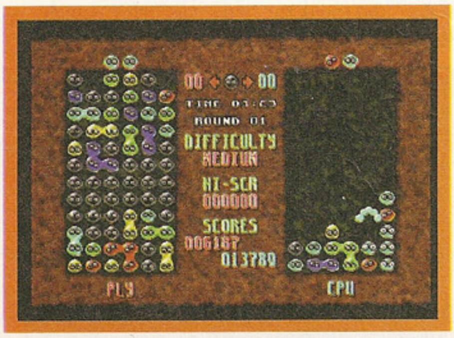
Tetris is probably the most cloned game ever. However, none of the copies has ever captured my interest as much as the original Commodore 64 version. *Outfall*, however, is different.

The twist that *Outfall* provides on the *Tetris* theme is that it's played against (possibly a computer-controlled) opponent, and instead of making complete lines of blocks you must group coloured blocks or "beans" together. When four or more similarly coloured beans come together they'll be eliminated and grey beans will be dropped onto your opponent's pile. If two or more groups are made at the same time, multiple grey beans will be sent. The grey beans can only be removed when they're adjacent to any coloured groups of beans formed. It plays a lot better than it sounds!

Outfall is slickly presented and is very addictive. The head-to-head aspect of the gameplay successfully spruces up an old and tired gaming concept.







Snatching defeat from the jaws of victory – getting thoroughly trounced at *Outfall*.

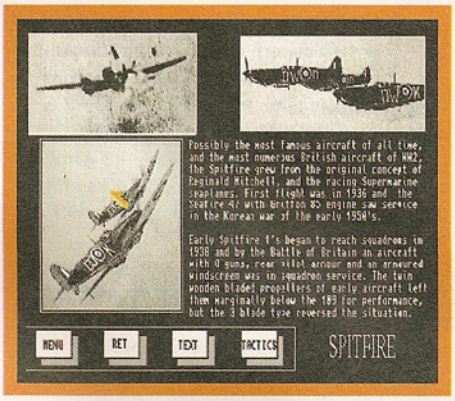
BY: David Papworth
WARE: Licence
FROM: F1 Software
DISKS: 1
PRICE: 80p (+£1.00 P&P)

Battle of Britain

Battle of Britain is an attempt to provide multimedia information on one of the most important battles of the Second World War. It works via a menu system and gives detailed text describing the decisions, tactics, aircraft, equipment used and the people involved. A large amount of scanned photographs are also provided.

While the content of this software seems accurate, there are some major flaws. With very few exceptions, I find that software which tries to be encylopaedic tends to have novelty value only and a physical library is still the best source of information. Combine this with fact that the *Battle of Britain* program itself is archaic – it was written in *AMOS*, is shipped as a Workbench 1.3 boot disk, is a pain to install to your hard drive and falls over flat on an '060 machine – and you've got the sort software the Amiga could well do without.





Everything you wanted to know (and didn't) about the Battle of Britain.

Battle of Britain is definitely one for enthusiasts only.

BY: Paul Broadbent
WARE: Freeware
FROM: OnLine PD
DISKS: 2
PRICE £1.50 (plus 75p P&P per order)

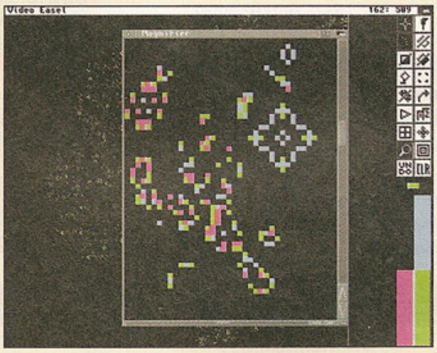
VideoEasel

The title of this software is perhaps a bit misleading. It is, in fact, a tool for experimenting with cellular automata. "What's that?" I hear you ask. Well, now concentrate – here comes the science bit.

Cellular automata (CA) are mathematical constructs. Picture a universe which is discrete throughout space and time. Each element of space is termed a cell and can be in only one of a finite number of states. Each time-slice is called a generation. The evolution of this universe from one generation to the next is governed by determinate rules. A cell's next state depends only on its current state (and perhaps previous states), as well as the states of its neighbours.

A familiar example of a CA is Conway's Life. This universe is flat, planar and divided into a grid. Each cell of the grid is either alive or dead. If a cell is alive and has three neighbouring cells which are alive then in the next generation it will remain alive; if a cell is dead and has exactly three neighbours, in the next generation it will be alive; otherwise the cell will be dead. Despite these simple rules, rich dynamics can be produced in Life. In fact, it's possible to build what are, in effect, logic gates and even a whole computer within this abstract universe.

Now translate this concept to a computer screen. Each cell will be represented by a pixel on the screen, the different states represented by different colours. *VideoEasel* takes this metaphor further. It equips you with paint package-like tools with which to draw pixels on screen, and hence set the starting conditions of the cells. Once you've 'drawn' the initial set up, you hit the start button and watch the drama unfold.



It's life, Jim, but not as we know it.

The software lets you define any CA you like. You may change the rules and the topology of the universe, etc. You can save out these settings as what *VideoEasel* calls an application, and a multitude of example apps are provided.

***VideoEasel* is Shareware. Paying the $20 fee gets you the full version which has full documentation, 450K of examples, extra ARexx scripts and RTG support. While this is undoubtedly a powerful package, the restricted demo version with its minimal documentation isn't going to encourage somebody who isn't already interested in Artificial Life to register.**

Continued overleaf ➡

BY: Thomas Richter
WARE: Shareware
FROM AMINET: graphics/misc/VideoEasel.lha
SIZE: 630K

Imperium Terranum 2

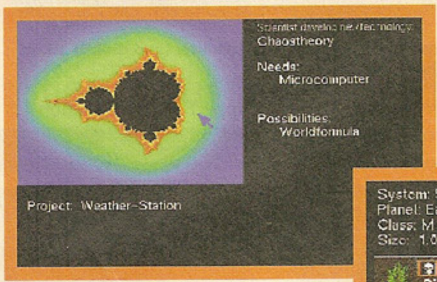
When I first saw this game, I thought what a superb concept: it's a fusion of two of my favourite games of all time, *Civilization* and *Elite*. *Imperium Terranum 2* is a strategic simulation on a galactic scale.

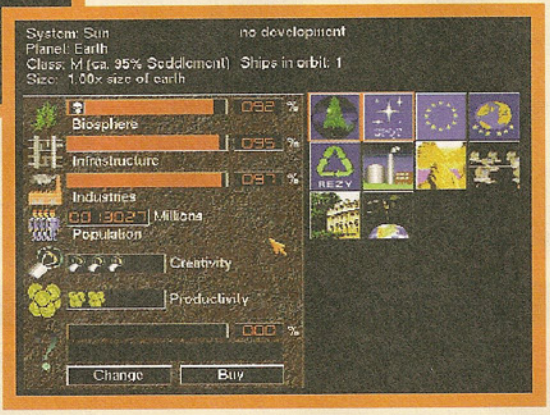
The major difference between this game and *Civ* is that the gameplay in *IT2* kicks off in the year 1900, rather than ancient-historical times, and conflict takes place between planets, not tribes. The idea is similar, though: you must organise the resources of your planet, encourage technological development, manage the foreign policy, overcome catastrophes and hopefully, one day, establish a galactic empire. Gradually, as your civilisation progresses with each scientific discovery, there will be new projects for your people to undertake (some engineering, some governmental) – first Continental, then Global Union, a recycling plant, space stations, the Internet, etc.

IT2 also features a great intro sequence, stirring classical music and amusing cut scenes of dog-fighting spaceships. But, alas, the whole thing is marred by poor production quality. The menu and GUI system isn't particularly intuitive, the text is poorly-translated from its original German (there's no English documentation at all) and the game runs in a non-promotable PAL screenmode.

OnLine supply the game compressed onto four disks using *ABackUp*, the HD backup system. This employs a custom disk format and so the only way to unpack and install it is with *ABackUp* itself. I don't know why they chose this method. A more usual split-up *LhA* or *LZX* archive and an installation script would have been much easier.

IT2 is Shareware. With the unregistered version you can only progress so far. If the developers had put a bit more polish into Imperium *Terranum 2*, it would have been more than worth its $20 fee.





Above: another great scientific breakthrough is achieved. Right: the planet Earth, ticking along nicely, thank you.

BY: Virtual Worlds Productions
WARE: Shareware
FROM: OnLine PD
DISKS: 4
PRICE: £3.00 (plus 75p P&P per order)
REQUIRES: AbackUp

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Aminet titles are available from these libraries.

RXSocket 7.1

ARexx is one of the Amiga's secret weapons. It's not merely a useful scripting language; its ability to control and communicate with application software also offers tremendous power. Not only that, anyone can write libraries with which they can extend ARexx's functionality.

RXSocket by Alfonso Ranieri is a shared library to interface ARexx with a TCP/IP stack. Basically, it allows you to use all standard socket functions from an ARexx script. You can now even create inetd (Internet Daemon) services with ARexx. The archive also contains comprehensive documentation and a large set of examples. One script provided allows you to log in to a POP3 mailbox and send commands to list, read and delete mails, etc. Another script retrieves web pages by http.

RXSocket is nothing short of genius – in a single stroke it doubles ARexx's usefulness.

BY: Alfonso Ranieri
WARE: Freeware
FROM AMINET: comm/tcp/rxsocket.lha
SIZE: 90K
REQUIRES: A TCP/IP stack

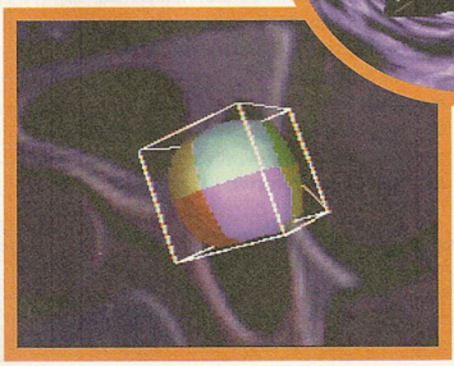
Nuance-Vendetta

The system requirements for even demos are escalating these days. This one, released at the Meka Symposium, Fallingbostel in April, is no exception, needing a minimum of '030/50 and 8Mb RAM with an '060 or PPC recommended (the PPC support is via WarpUp) for full enjoyment.



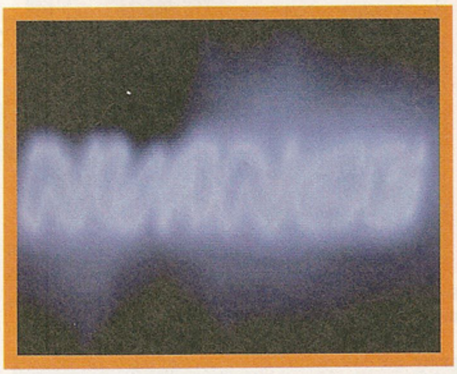
Nuance-Vendetta is the usual demo fare, with hypnotic patterns, swirly plasma effects and thumping tunes. It does have a few nice effects, such as a series of full-screen shots of flowers morphed into one another and the face of woman which is gradually scaled in real-time to give the effect of a camera zooming straight into the pupil of her eye.

As with all demos though, you'll probably only fully appreciate it if you're part of the 'scene' and speak the 'language'. Hey, Amiga Rulez, man!





It's just swirly stuff on your screen, really.



BY: Sniper, Odin, Evrimsson and Andy
WARE: Freeware
FROM AMINET: comm/www/NCE-VEND.lha
SIZE: 1.8Mb

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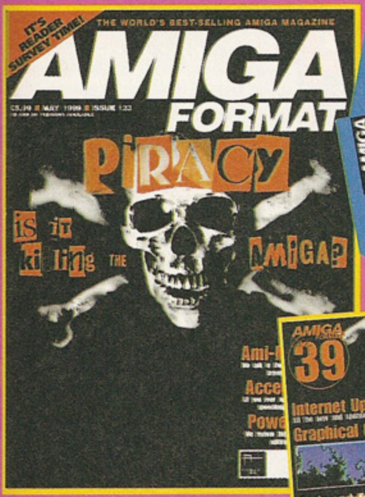
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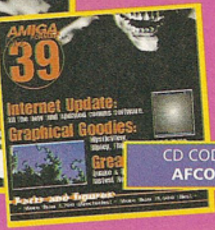
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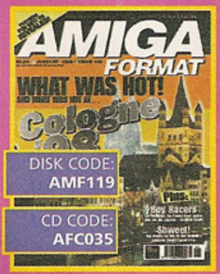
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Two of the most eagerly-awaited graphics packages arrived this month, but neither of them were very stable. Is this a sign of things as they are today, or just a programming problem? Well, it's probably a mixture of both.

Since Amiga development is as expensive as it ever was, it's not easy to be able to afford the glossy printed manuals we once took for granted, and development tools aren't as easy to come by as they once were, especially when so few people actually buy the software as are supposed to. At least there'll be updates…

Ben Vost

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80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
70-79%	Not a bad product but quite possibly one that needs a serious update.
60-69%	Average products with somewhat limited features and appeal. Products in this category tend to be flawed.
50-59%	Below average products which are unlikely to impress your mates or your wallet. Avoid.
40-49%	Overwhelmingly poor quality products with major flaws.
Under 40%	The absolute pits.

Art Effect 3

Art Effect gets an upgrade and **Ben Vost** whoops with joy.

For those of you living in the dark, *Art Effect 3* is Haage & Partner's best attempt so far at creating a version of *Photoshop* for the Amiga. It emulates a lot of the way that the world's best-selling paint package does things, including asynchronous redraws, virtual memory, layers and so on, although it hasn't had the amount of development time that Adobe's monster application has had, nor the amount of developers devoted to it. As such, and bearing in mind that not only is it a damned sight cheaper but it's on your Amiga, it would be churlish of me not to give it a Format Gold award. But, and it's a big but (as the bishop said to the actress), it's definitely not perfect yet and it still needs a lot more development.

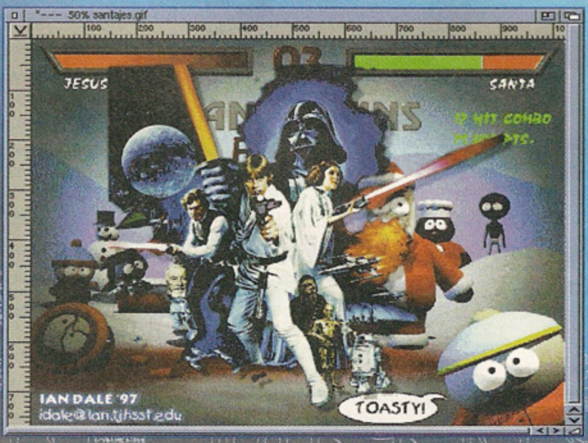
That said, this is probably one of the nicest all-purpose art packages I've used for the Amiga, and while *ImageFX*, *ADPro*, *PPaint*, *TVPaint* et al have features that they do better or faster than *Art Effect*, if you were to only have one art package I wouldn't hesitate to say that you should choose *Art Effect*. Well, and *PPaint* – it's hardly expensive and it's far more useful for pixel-level editing than any of the 24-bit packages are, for obvious reasons.

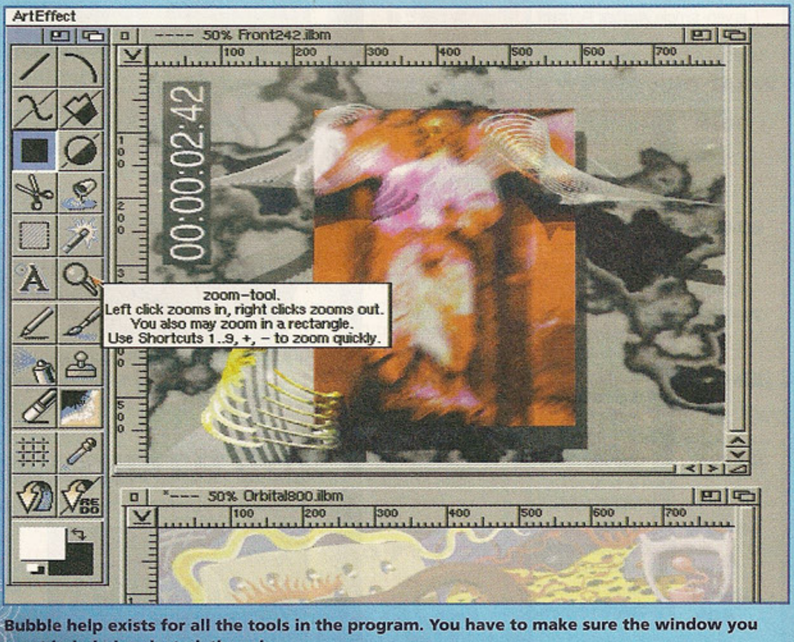
So what does the new version offer over previous ones? Is it worth getting an upgrade if you already have v2.6? The answer is yes. Not only has the layering function been extended and improved to the point where it's not only useable but almost indispensable, there have been numerous other improvements too, not least of which is the new gradient mixer, more on which later. *Art Effect* can now edit palette-mapped images (that's pictures with 256 colours or fewer to me and you), although it seems somewhat flaky at recognising exactly what format an image is in, loading all of them as 24-bit and forcing a lengthy conversion down to 256



***Art Effect* now has much lower memory requirements for multiple images than before.**

> **"One big addition to Art Effect is a long-awaited ARexx interface for some of the more popular functions..."**





Bubble help exists for all the tools in the program. You have to make sure the window you want help in is selected, though.

OTHER PLUG-INS:

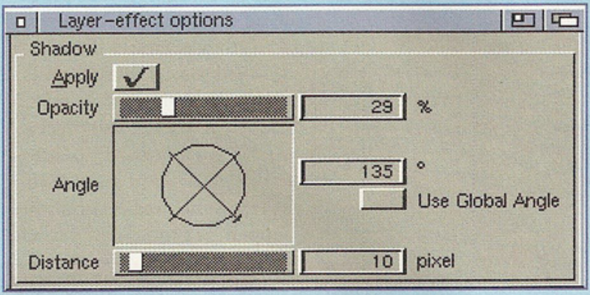
All plug-ins cost £24.95.
***Power Effects 1*: New effects.**
***Power Effects 2*: More new effects.**
***Colour Separator*: CMYK separation of images for print.**
***PowerUP PPC Effects*: New effects that use the PowerPC for their processing.**

colours once loaded. The online docs give you a good idea of what's changed, but the manual shipped with the package is still dated from 1996, back to version one, which is something of a pity since so much has changed it's hardly worth reading it at all any more.

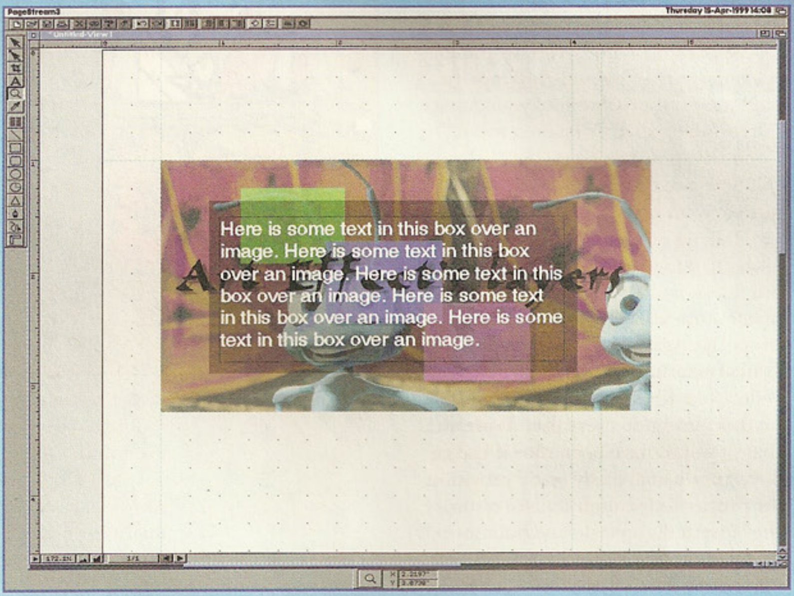
In addition to the changes within the program there are now two new additions in the shape of the Kodak DC20 plug-in, which lets you download images from said camera, and the gradient mixer. This powerful tool, much like the one in *DPaint* but 24-bit, allows you to make up gradients for filling shapes and, most importantly, saving them. This means that once you've found the gradient setup for a "chromed" surface, there's no reason why you shouldn't save it for future use.

You've also got a new filter in the shape of Polar co-ordinates. While this can be used for funky effects, its best use is for 3D modellers who'd like lighted windows in the underside of their flying saucers. By painting rectangles onto a normal image and then applying polar co-ordinates, you get a much better effect which can be flat-mapped onto your object's underside a lot better than either trying to morph your object to the correct shape or by trying to draw circular windows, if you see what I mean.

Continued overleaf ➡



You can apply shadows to layers automatically.



LAYER CAKE

One of *Art Effect*'s main features is its ability to produce layered images. These images are ILBM files so any picture viewer can see them normally, but load them back into *Art Effect* and you get your layers back. This is much better than the *Photoshop* or *ImageFX* way of doing things where a special file format is required.

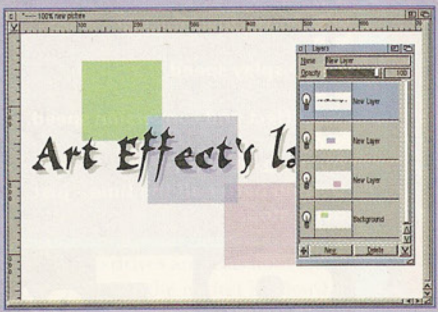
Layers can have their own transparency set so you can overlay shadows on top of images that are already there. A good example of this would be a large image with a 50% black box over the top of it which could be taken into *PageStream* as an IFF ILBM file. The advantage is that the black box is still mutable, without affecting the picture underneath, so if it's a bit dark or light you can simply load it back up in *Art Effect* and change the layer's opacity, or even change the shape of the box and so on. You can even have hidden layers, although these do bump up the image size, which could contain copyright information or simply details about the image. The test image shown is 1.5Mb big with layers and only 578K in size when flattened.

***Art Effect* allows you to reorder the layers as you see fit and to change the opacity levels. You can also ask for a drop shadow for a layer in the "Adjust Effects" box and this will add a drop shadow to each layer you choose it for. If you're happy with the way several layers fit together, you can merge them by simply dragging one layer onto another in the Layers window and they'll become one layer – the opacity for the original layer becomes set and a new layer opacity of 100% is given.**

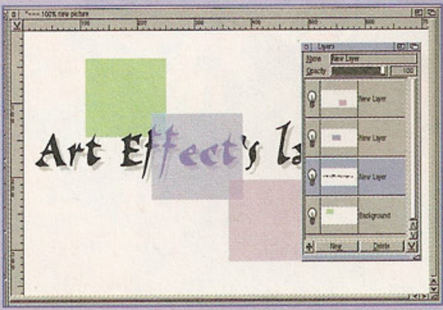
You can move layers around the picture area. This is especially handy if the layers aren't completely filled so you can reposition picture elements to suit you. However, all isn't perfect in layer paradise. Moving layers around doesn't work properly in the sense that if you're trying to move a lower layer around, you really need to bring it to the top of the pile before the changes seem to take place, then you have to move it back down the stack.

It's also very hard to have two separate images brought together as layers (image one as layer one and image two as layer two), or to apply filters to layers that are inherently transparent. You'll find you have to fill the layer before applying an effect and, although there's the new eraser function, there's no easy way of removing colour once it's on a layer – you have to make a stencil, which can be time-consuming.

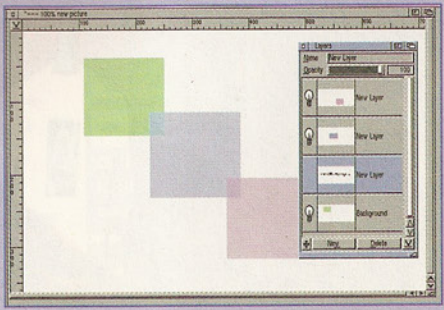
The only other thing that's sadly missing is the ability to use a layer as an effect, rather than simply adding colour to an image. I guess that doing this would make it awkward to stick to the IFF standard, but I hope Haage & Partner can work out some way of doing it for future revisions of this package.



Start with four layers, three with a box of colour and one with some text. Use opacity and shadows.



You want the blue box in front of the writing? Just drag the layer higher then.



Now you see it, now you don't. You can also easily hide layers and save your image with them.

One problem that *Art Effect* still has is font handling. Rather than giving you the ability to really play with fonts, as befits an art package, you have to use whatever bitmaps and CG fonts you have installed and make do with only one line of text.

To make use of *Photoshop*'s example, not only can you have multiple lines of text previewed in the font window, but you can say how they'll be rendered – vertically, horizontally, centred, left justified and so on. You've also got control over things like leading and spacing, something that *Candy Factory Pro* offers but *Art Effect* doesn't.

Apparently it does work with the third party *TrueType* and *PostScript* type 1 engines out there that fool your Amiga into thinking that it's dealing with Compugraphic typefaces, but these solutions are only designed for screen work and aren't really suitable for print.

Talking of which, *Art Effect* still allows you to work with a CMYK palette, but doesn't allow you to convert your images into CMYK for it to work properly . As it's used so far, CMYK (which stands for Cyan, Magenta, Yellow, blacK) is only another palette method, and not a very useful one at that. It would have been nice if Haage & Partner had actually made provision for proper four-colour images when they inserted greyscale and palette-mapped modes. However, there's apparently an additional plug-in available for this purpose. See the boxout on these pages for details.

One big addition to *Art Effect* for this revision is a long-awaited ARexx interface for some of the more popular functions provided by the software. Unfortunately, the command range isn't particularly extensive at only 41 commands, although they do seem quite powerful. Even worse, the only documentation for them is in German, making it hard, though not impossible, for monoglots to understand.

Compositing still seems to be a weak point in *Art Effect*'s armour. Although you can chop out a brush and paste it down, or use the admittedly very useful pantograph, there's no direct matting of one image on another, which is an essential tool to have in an image processing program.

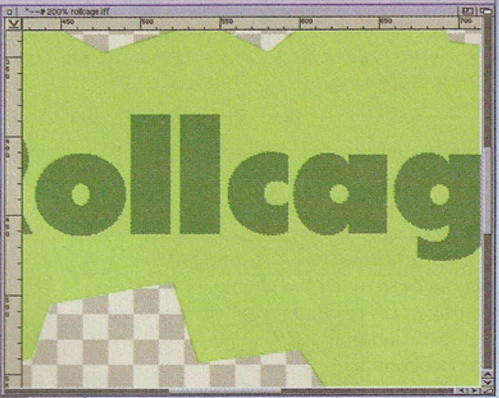
Overall, *Art Effect* is a fine piece of software. It still isn't as rock solid as it might be, especially when compared to some of the paint package competition, but it's certainly more stable and better-featured than previous versions, and at a much more reasonable price.

The idea of having separate plug-ins for sale on their own is a bit steep, but even so, if they're things that not many people will want to have then I guess it's fair enough.

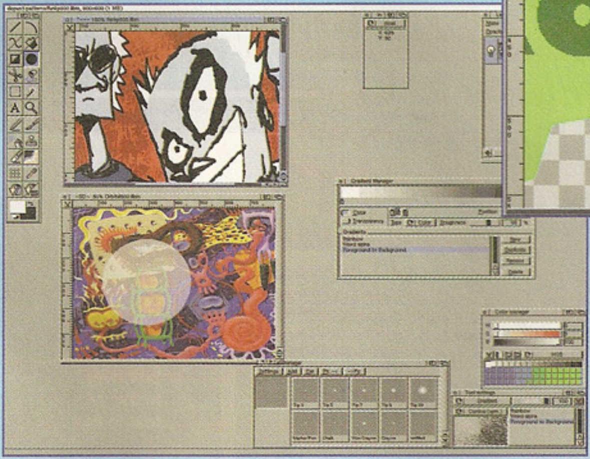
As I said at the start of this piece, *Art Effect* is oh-so nearly worthy of an Amiga Format Gold award as it's getting so good. Perhaps the next version will see that happen.

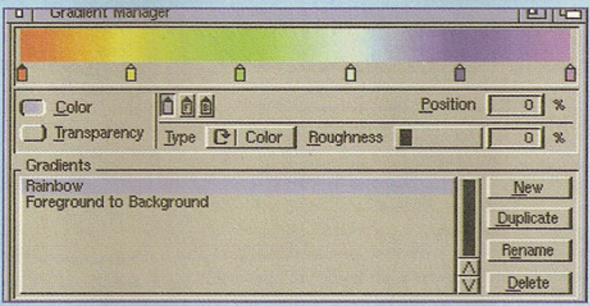
THINGS TO IMPROVE

- Magnify should also be available at 75% and 66%, instead of just 100%, 50%, 33%, etc.
- Layer opacity shouldn't change when re-arranging layers.
- Font handling should be vastly improved (still).
- Better handling of palette-mapped images.
- Better stability.
- Better anti-aliasing of layers and images.
- More pointers to show which mode you're in.
- A user-adjustable time delay for the bubble help.

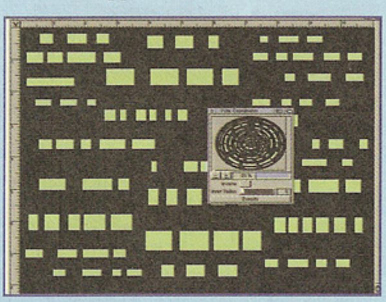


Because fonts are bitmapped, they aren't readily anti-aliased.

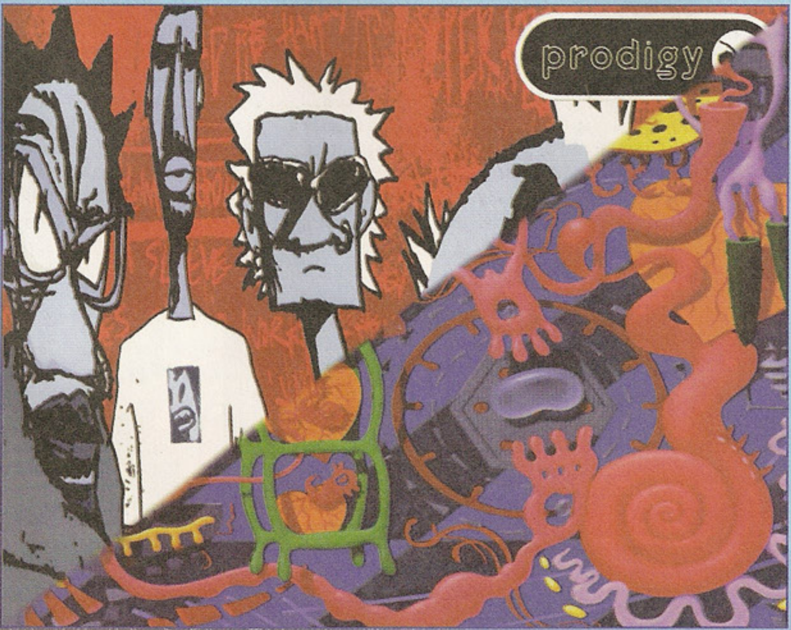




The handy new gradient editor can be a bit flaky.



How to make a ring of windows for your spaceship, thanks to polar co-ordinates.



Using layers means it's easy to composite two images together like this.

DEVELOPER: Haage & Partner
SUPPLIER: Blittersoft (01908) 261466
PRICE: £79.95
REQUIREMENTS: Hard drive, AGA or preferably a graphics card, lots of memory, a fast processor

Pros and Cons

- \+ Superb layers functionality.
- \+ Better than the last version.
- \+ Display speed.
- − Effect and conversion speed.

OVERALL VERDICT:
Getting better all the time – just don't stop.

85%

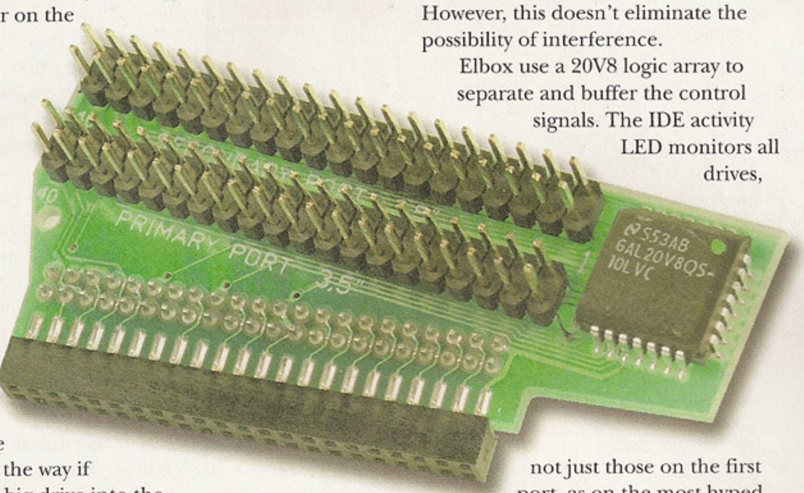
4x EIDE '99

AMIGA GOLD FORMAT

Atapi days are here again, as **Simon Goodwin** tests the 4x EIDE '99 package from ***Elbox*** via ***Power Computing***.

There's no shortage of Amiga IDE expanders, but Elbox have devised one so elegant it makes all its rivals look like hasty bodges. The 4x EIDE adaptor slots vertically into the 44-way IDE connector on the Amiga 1200 or 600 motherboard. A duplicate connector sticks out at right angles, nicely positioned for a 2.5" drive. Two 40-way connectors project from the other side, ready for standard cables to 3.5" drives or CD-ROMs with separate power.

You don't need to remove the shielding, but the adaptor might get in the way if you've shoehorned a big drive into the bay intended for a little one, and the Amiga case has no convenient outlet for external cables.



The tiny adaptor slots vertically onto the Amiga motherboard.

The IDE specification limits these to 18" in length, barely enough to reach drives in an adjacent tower. IDE was designed for use inside the computer case and is much fussier than SCSI about cable length.

> Setup software allows speed tweaks and automatic spin-down of unused drives after preset delays.

The floppy disk includes a standard installer for the patch to support large EIDE drives and four A4 pages of clear documentation. Setup software allows speed tweaks and automatic spin-down of unused drives after preset delays. Elbox also supply a speed tester and formatter for removable drives like Zips or LS120s.

IDE DOGMA

Each IDE connector allows two drives, master and slave, distinguished by cable twists or jumper settings. Stock Amigas support two drives and can boot from either. Typically the master is a hard drive and the slave is a CD-ROM.

In practice, hassle-prone jumper settings and interactions prevent some combinations sharing a cable. IDE ports are just cut-down ISA slots so it's easy enough to provide two, with their own connectors. The simplest circuit, on Aminet, does this with just two diodes. However, this doesn't eliminate the possibility of interference.

Elbox use a 20V8 logic array to separate and buffer the control signals. The IDE activity LED monitors all drives, not just those on the first port, as on the most-hyped 'buffered' interface, and logic prevents interference from antisocial drives like HP210s.

The 16 data lines aren't buffered as that's unnecessary on this mode 0 port. The A4000 boasts buffers intended for faster PIO modes 1 and 2, though Commodore never finished that job. Flyer and Express accelerators incorporate the buffers and termination necessary for modes 3 and 4.

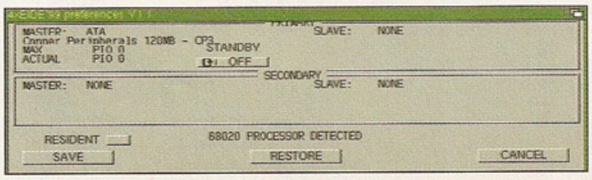
DIVIDE AND CONQUER

Modern EIDE drives can be very big. The Amiga uses 32-bit signed numbers to 'seek' file positions, giving the standard Fast File System a maximum range of +/- 2Gb. This is the upper limit on FFS partition sizes. If a drive uses more than 4Gb, the unsigned 32-bit limit, data intended for the end wraps back to the start, just as car mileometers wrap round when they run out of digits.

Amiga International's *TrackDisk64* patch uses 64-bit addressing to remove this limit. This works but requires new partitioning, format and recovery software. Vital programs like *DiskSalv* ignore the patch. Elbox avoid such catastrophes with a simpler patch that makes each 4Gb area appear to be a separate drive so you can use up to 128Gb (four drives in 64 partitions) with total software compatibility.

In the long run, *TrackDisk64* is the way to go, but right now Elbox have the best solution.

EIDE '99 Preferences suffer if you use a custom font.



EIDE PERIPHERAL INPUT/OUTPUT (PIO) MODE LIMITS

PIO	Word Time	Top Rate
0	600 nS	3.33 Mb/S
1	390 nS	5.25 Mb/S
2	240 nS	8.33 Mb/S
3	180 nS	11.1 Mb/S
4	120 nS	16.7 Mb/S

CONCLUSION

This adaptor is well-made, well-documented and easily installed. It simplifies adding a 40-way ATAPI CD ROM cable and making backups to another big IDE drive.

You still need *IDEFix* or suchlike for CD-ROM access as there's no ATAPI device or CD file system, but compatible code is freely available on Aminet. Elbox have also started developing their own fast, hand-coded one for a future bundle.

SUPPLIER: Power Computing 01234 851500
PRICE: £24.95
REQUIREMENTS: A600 or A1200 with Kickstart 3, IDE drives

Pros and Cons

- \+ An exceptionally neat fit inside the A1200.
- \+ Compatibly supports up to four 32Gb drives.
- \+ Buffered control and activity LED signals.
- − No faster than Commodore's IDE interface.

OVERALL VERDICT:
Highly recommended if you can't stretch to SCSI.

92%

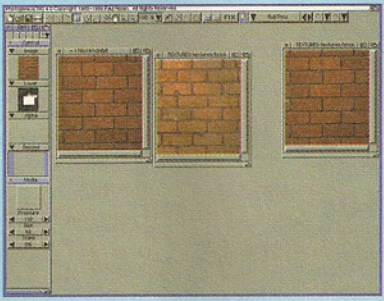
Photogenics 4.0

Nick Veitch desperately tries to avoid any paint-type puns. Does he succeed? Draw your own conclusions. Doh!

The Amiga has always been home to great graphics software, and also the birthplace of some very innovative programs. One example of both of these phenomena is *Photogenics*, which is pretty unique in a lot of respects. Originally published by Almathera, it has continued to be developed by the original author of the software, Paul Nolan.

> **"One of the great features of Photogenics is that it allows you to paint in different ways, using its different media types."**

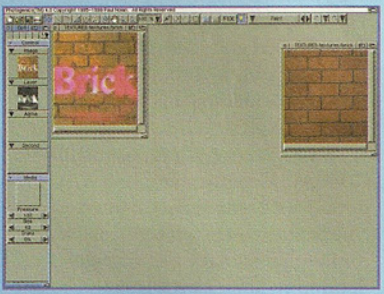
Photogenics 4 is his latest release, which, as well as having a host of new features, has been fundamentally redesigned in terms of its GUI and the way the software actually functions.



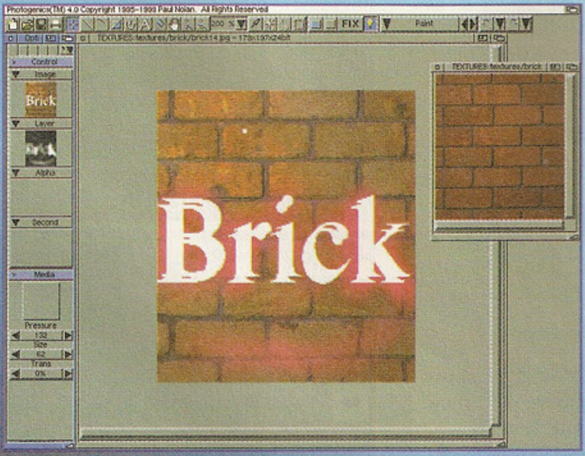
Having many images open at once is fine, but occasionally, as here, *Photogenics* won't let you select any of them as an alpha channel.



The fire mode is useful for some effects, but it's probably not one you'd use every day.



Having many layers means you can construct quite complicated paint effects (not shown) and also rearrange things to suit.



Here the spraycan layer has been put to the back so it appears as a backdrop to the text.

LAYERS

One of the new features of this version of *Photogenics* is the addition of multiple layers. *Photogenics* has always had a layer system of sorts, as the "paint" layer has always been flexible until it's fixed. Now, however, you can have multiple paint layers which you can apply different effects to, and you can change their order for real flexibility.

The layer system isn't that easy to use, though. Unlike other layered software such as *Art Effect*, or indeed *Photoshop* on the Mac, the layers are just shown as thumbnails in a strip which pops out when you hold the mouse button down on the main layer thumbnail. It's relatively easy to select the layers, but the fact that they work from left to right instead of from top to bottom may take a little bit of getting used to.

Unlike other software, the layers can't have effects applied solely to them because these layers are the effects. If you're used to more conventional software, it may take a bit of figuring out how to achieve the results you want.

That said, this extra flexibility is a welcome addition, and the layers don't rely on buffering the entire image into huge banks of virtual memory, which comes as a great relief.

PAINT MEDIA

One of the great features of *Photogenics* is that it allows you to paint in different ways, using its different "media" types. These include an airbrush, a pencil, watercolours, two types of finger painting and a special effects mode.

These media effects are very easy to control and adjust. You can alter their sensitivity easily via the sliders on the side panel to generate any effect you want. They can be a bit slow when the brushes are large, or if you're using complicated patterns like the sponge. It's just about bearable on an '040, but if you're planning on doing a lot of this sort of work, an upgrade is going to be pretty much essential.

However, these natural media are implemented in *Photogenics* to a much greater extent than in any other Amiga graphics package, so if you want to create computer graphics that look like they were hand-drawn, this is pretty much the only choice.

MODES

Another unique feature of *Photogenics* is the ability to paint with effects. The Mode bar allows you to select the drawing mode, which in addition to paint includes things like "fire", various types of blur, rub through, bas relief, a

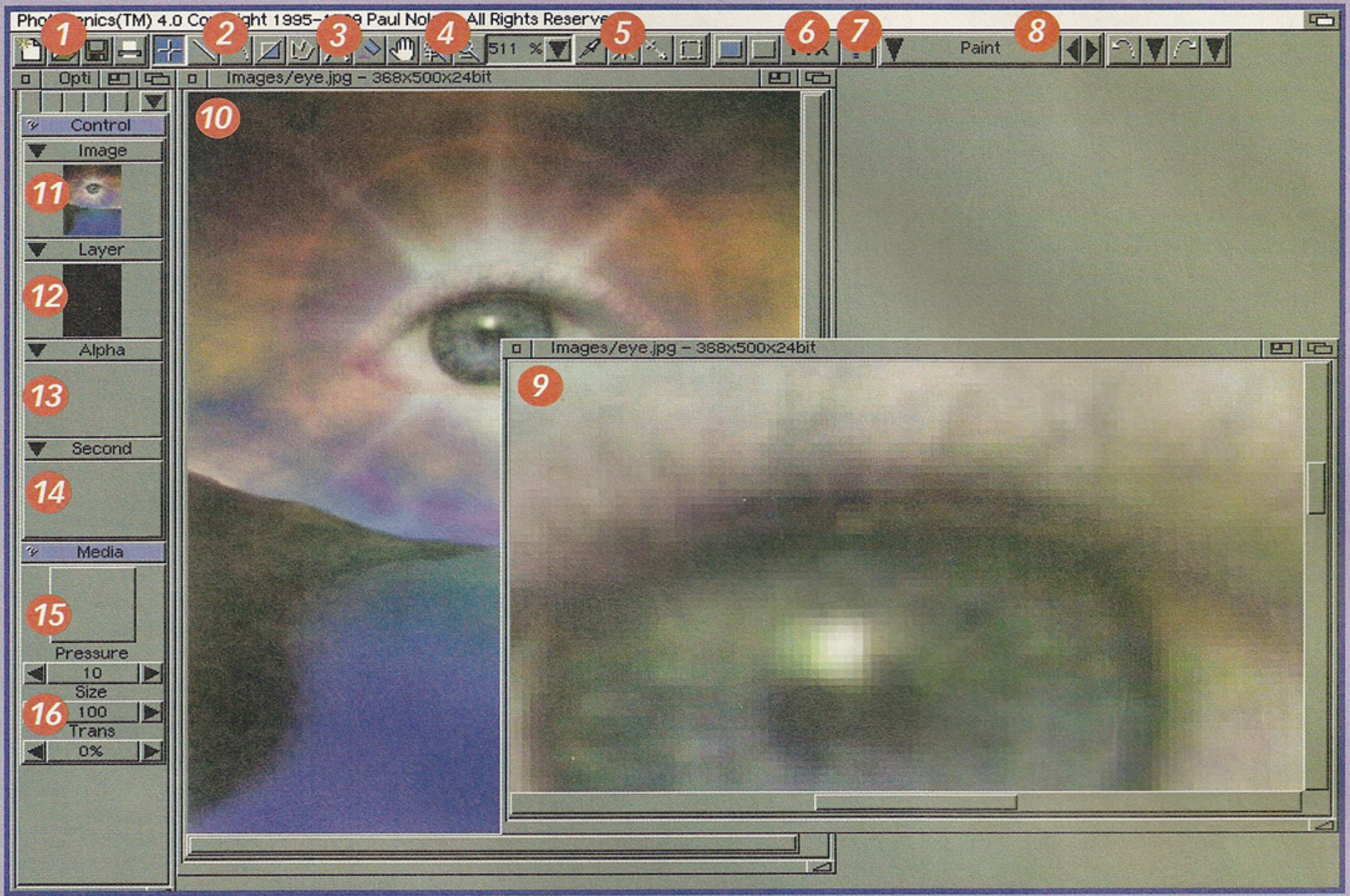


Using a secondary image means that you can rub through drawings, which is a very effective way of compositing.



Oops. There are still one or two bugs to be ironed out. Still, at least this time it didn't make the whole system fall over...

THE MAIN CONTROL SCREEN



1 There are different icons for opening, closing and printing files, as long as your screen is big enough.

2 The drawing tools include a line tool, a curve tool (similar to the one in *DPaint*), a polygon tool and a box tool. For some reason there are no circular drawing tools, which is a bit of an omission.

3 The Text tool will allow you to draw a box on the screen. Then you can choose a font from the side panel and type in some text. You can move the box and resize it to get the text flowing as you want, which is nice. However, it's a bit glitchy.

4 The Hand tool is for positioning the layer. *Photogenics* is quite unique in its ability to "paint on" an effect and then be able to move it around the screen.

5 The colour picker allows you to grab a colour value from the image window. The crop, fill layer and clear layer tools are quite self explanatory.

6 The Fix button makes your drawing permanent, effectively combining the paint layer with the image layer.

7 The lightbulb enables experiment mode. With this active, painting and modes aren't automatically fixed so you could draw in "blur" mode, for example, but then change the drawing mode to "emboss" to see what another effect would look like.

8 The mode bar scrolls down to reveal all the available painting modes, which are now hierarchically grouped into themes.

9 It's possible to have two windows open at once which relate to the same image. This is very handy for doing close-up work.

10 All of the image windows can be scaled between 10% and 800%.

11 The image palette shows you a thumbnail of the current fixed image. You can use this to swap between different images you may have open. There's a pull down menu here for quick access to loading and saving.

12 The layer palette show you the current paint layer. You can now have multiple paint layers and the pull down menu allows you to add or delete them, or rearrange the order which they're in.

13 The alpha channel palette works in pretty much the same way as the image palette, allowing you to swap between images. The menu also allows you to invert it.

14 Secondary images are used for rub through effects. You can choose any open image to be the secondary one by holding the mouse button down on the thumbnail and then selecting from the range of images which will then appear.

15 From here you can select special types of natural media, including pencils, charcoal, watercolours, finger painting, sponge and several types of special effect.

16 These sliders are used to adjust the weight, size and transparency of the current brush settings.

whole range of colour processing effects and so on. Disappointingly, there are no options to add your own convolution-type effects, and there are absolutely no twirl or swirl effects either. This is obviously a bit of an oversight, but as these modes are all created as plug-ins, perhaps one will be added at a later date.

Since you can literally paint these effects on, they can be made to work in ways which simply aren't possible, or at least are extremely time consuming, in other software packages.

EXPERIMENTATION

Another new feature is the experimentation mode, or, in fact, the non-experimentation mode. Basically, with experimentation mode on, *Photogenics* behaves like it used to in the very beginning. You can paint with a brush, move the whole layer around, change the colour and effect and, only when you're happy, finally "Fix" the paint layer into the image.

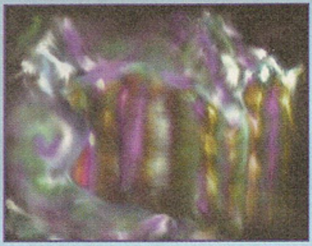
With experimentation mode disabled, the image is now automatically fixed when you change brush types or colours, or if you choose a new effect. This is quite useful if you know exactly how to achieve the effect you're after because you don't have to keep pressing the Fix button, and if you've made a mistake you can always use the Undo feature.

Photogenics 4 keeps an undo list which you can see on a pop up menu any time you want. It keeps track of the last adjustments made to the image, and you can obviously click on the undo button to undo the last thing you

Continued overleaf ➡

did. The undo buffer doesn't consume a huge amount of memory, but if it does get a bit too large you can always flush it to get back those valuable extra kilobytes. The software also includes a redo function, which works in almost exactly the same way but in reverse if you see what I mean.





Just two of the impressive images you can create in *Photogenics*.

STABILITY

Unfortunately, for all its good points, in this release the software is rather unstable. On testing it crashed numerously while trying to do anything with the access menus or when using fonts, changing drawing modes and it also crashed several dozen times while using the Options panel.

Perhaps it's simply that it doesn't like the particular test machine, but it smacks of poor testing. The release notes confess to some minor bugs but I lost count of the number of times I had to reboot. Occasionally it crashes nicely, but most often it just returns a system failure message.

COMPARISONS

There are few graphics packages on the Amiga with which *Photogenics* can properly be compared. *ImageFX* is more geared towards image processing rather than actual drawing, and while it has better ARexx script support and more customisable effects, it certainly isn't very friendly for artists.

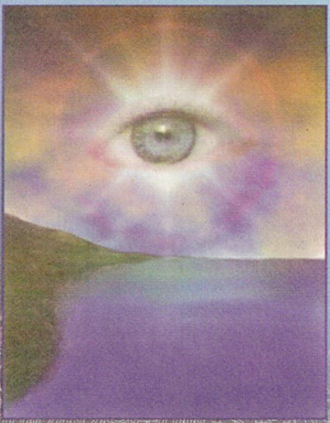
Art Effect is closer with its different media types and more flexible drawing tools, but it's bulky and heavy on memory and processor time. Then again, it does work most of the time.

DOCUMENTATION

The author originally intended to complete full HTML documentation to accompany the software on the CD, but he hasn't quite managed to finish it yet. This means that the current extent of the documentation is a text file, which simply lists the basic functions of each button and clears up some common queries.

If you're very familiar with earlier versions of *Photogenics*, this might be enough to get you going, in spite of the fact that the layout of the software has radically changed, but as *Photogenics* is quite unlike any other Amiga graphics software, beginners might find it a bit tough going. Even old hands may be a little confused by some of the newer elements, such as the multiple layers.

A good example of the rub through special effect.



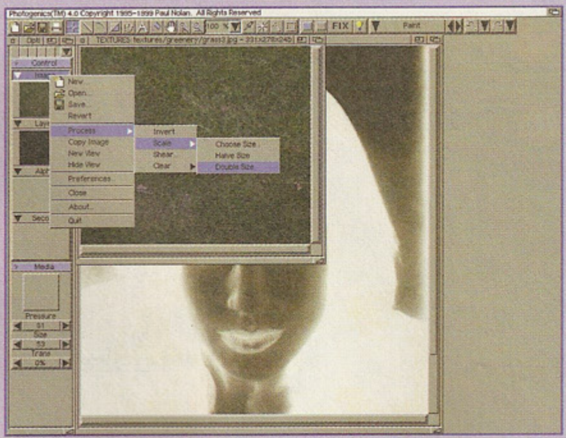
I'm sure that the HTML documentation will be completed shortly, but at the moment, if you haven't used previous versions of *Photogenics*, it's probably going to take you quite some time to get to grips with this version.

CONCLUSION

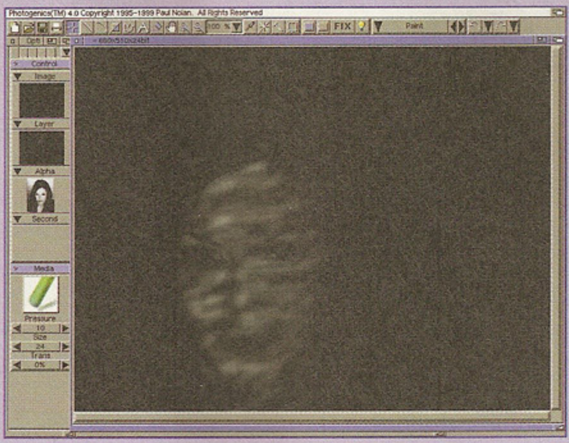
Photogenics certainly has great scope to be the best drawing package on the Amiga ever, but perhaps it hasn't quite reached that potential yet. However, the software is fundamentally sound and all of its problems could probably be sorted out rather easily. It just doesn't seem quite finished yet.

If you want to actually draw images, as opposed to just processing them, this software offers you the best features you're likely to find, though you'll need a graphics tablet if you want to get the best out of it. You'll also need a decent graphics card – the software does support all Amiga screenmodes, but because of the nature of this software the updates on HAM8 and DBLPAL screens, never mind Multiscan ones, are very, very slow.

SPECIAL EFFECTS



Control of the layers and channels is pretty comprehensive, but often not quite as straightforward as you might want.



The natural media, like charcoal used here, are useful for drawing your own images, or for applying some interesting effects to existing images.



The colour chooser palette is pretty comprehensive and offers RGB and HSV models.

PUBLISHER: Paul Nolan
http://www.photogenics.co.uk
REQUIREMENTS: Not stated in documentation
RECOMMENDED: 16Mb+ RAM, graphics card, graphics tablet

Pros and Cons

- \+ Excellent natural media support.
- \+ Unique layer/paint system.
- − Poor documentation.
- − A little unstable.

OVERALL VERDICT:
If you want to draw rather than process, this is the software to use.

80%

MSX Nostalgia

Simon Goodwin appraises the latest in Amiga MSX emulation.



MSX enthusiasts can finally look Spectrum and C64 enthusiasts in the eye now that a compilation of emulators and software is available on CD, just for them. This includes *fMSX2*, which generates 68020 routines dynamically from the original Z80 code as it runs.

MSX was a collaboration between Microsoft and hardware manufacturers, mainly in Japan, setting a standard for 8-bit micros. It launched in 1983 but production outlasted Commodore, continuing until 1994. I'll discuss the CD and then wax lyrical about Hans Guijt's ingenious emulator.

Epic's *MSX Nostalgia* CD holds 62Mb, perhaps half of which is directly useful; there's 20Mb of unique MSX software and 4Mb of Amiga code. Many of the 300-odd MSX cartridge games appear several times, with slight variations in location or file name. It's a shame more utilities aren't supplied unpacked, ready to use.

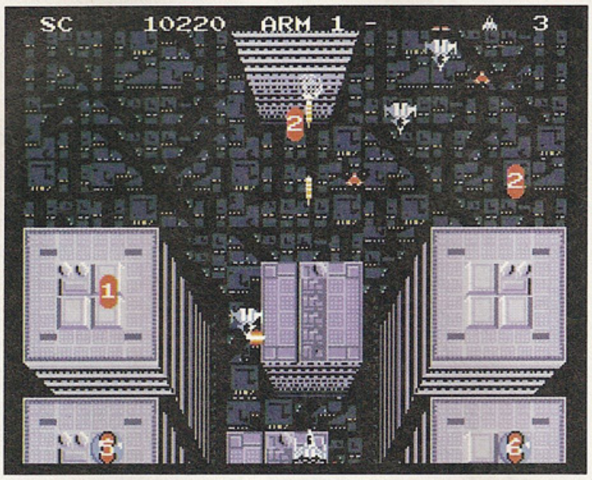
> If MSX is just a passing interest, you may be better off with Freeware fMSX2 and Flash ROM 2 instead...

THE SOFTWARE

The two main drawers, GAMES and GAMES2, each hold hundreds of files. These use MS-DOS 8.3 filenames so *LodeRunner1* through *3* became LODERUNN.ROM and only the last made it into the GAMES2 drawer. Ironically, *LodeRunner3*, the 'Championship' version, is also present as CHAMPION.ROM, clobbering *ChampionProWresting* in the process.

Luckily, the GAMES2-RealNames directory for non-MS-DOS victims uses full descriptive names, thereby rescuing a dozen files otherwise truncated.

The CD concentrates on cartridge-based games, most of which look and play like Nintendo or Sega console titles. Sadly, given *fMSX*'s excellent floppy emulation, there are no disk-based applications. There are audio applications, a database and a spreadsheet among the games, but serious MSX programmers must add their own software from floppy.



fMSX scrolls *Aleste* along nicely.



Higher-resolution *Aleste* on MSX2.

You get loads of platforms, ladders and map exploration scrollies, and a fair few shoot-em-ups too, often barely distinguishable. PSG sound soon becomes authentically irritating. Konami's SCC is superior but less common. You must install *AHI*, which isn't included, to emulate both at once.

EMULATORS

There's 25Mb of material specific to Wintel PCs, along with Mac *FreeMSX* and *fMSX*, and Unix ports which should work on *Linux 68K* or *NetBSD*. Don't expect much speed – the original C-coded *fMSX* was sluggish, even on SPARC workstations. Amiga-specific code runs many times faster.

The CD and *fMSX 2* drawers have standard Amiga icons and 8-colour alternatives, which ease Workbench access. The cartridge collections have no icons but are obvious to the emulators' standard requestors.

RETARGETING

fMSX2 offers retargetable graphics and sound, via *CyberGraphX* or *Picasso96*, so it requires Kickstart 3, plus *AHI* for 16-bit audio cards. Programs expecting 256-colour MSX2 modes are 'gracefully degraded' to 64-colour Extra Half Bright mode on ECS Amigas.

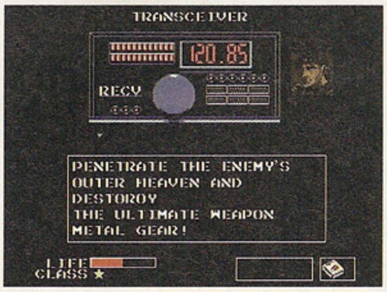
Most games run synchronously with the NTSC or PAL display as MSX architecture suits that style of programming. Speed regulation allows authentic timing on accelerated Amigas. *fMSX2* surrenders the processor to other Amiga tasks, rather than furiously, futilely, twiddling its thumbs. Interrupt rates from 24Hz to 100Hz facilitate game speed tweaks, though both the sound and graphics may glitch a little bit at the extremes.

NET RESOURCES

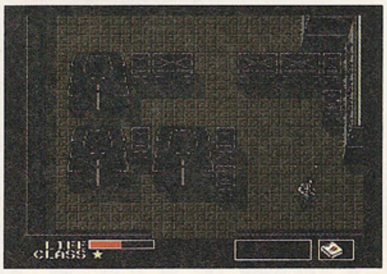
http://www.komkon.org/fms/MSX/Docs
http://www.sci.fi/~tonisra/msx.html
http://www.dcce.ibilce.unesp.br/~aleck/msxring/
http://www2.jcsnet.or.jp/~kojima/msx-e.html

FTP data archives:
ftp.funet.fi/pub/msx
ftp.komkon.org /pub/MSX

Usenet News:
comp.sys.msx



English not primary my language, sorry.



MSX, not CPC, begat the original (non-solid) *Metal Gear*.

FMSX2

Hans Guijt's Freeware *FMSX 2* is a dynamic recompiler, the most potent emulation around. It rewrites MSX programs in Amiga machine code while it runs. On an A4000/'060 it's almost 20 times faster than the original Unix code on a SPARC 2 workstation.

It's the difference between reading a foreign book by looking up each word in a dictionary as you go along, compared with translating the entire text and then working from the translation. The first approach is enough to get you started fairly promptly, but soon gets bogged down. Programs are often reread as they run, and the 'words' seem simple compared with the effort of looking them up.

This radical development can outrun all the Amiga's interpreting Z80 emulators, which must laboriously look up code for each Z80 instruction. Interpreting emulators have gone about as far as they can on Von Neuman and Harvard architectures and underuse modern pipelined processors. Future compiling emulators will have sophisticated optimisers that merge blocks of code to save time and space.

However, there are pitfalls. A compiler must work hard before its output is any use at all. Programs, unlike books, can change themselves as they go along. A useful compiling emulator must check for this, or else it will carry on running the old code after it's been replaced.

fMSX2 surmounts both obstacles. Like *Qdos ZM/HT*, it dynamically compiles as it runs. Translation delays are imperceptible, swamped by the time saved when code doesn't need to be re-interpreted. Dynamic recompilation tracks code invalidation, and performance monitoring doesn't need to limit speed.

THE COST

The only cost is extra memory, for dynamically-generated 68020 code, typically more verbose than the Z80 equivalent. *fMSX2* uses 32-bit extensions added for the 68020 and needs more speed and space than chip RAM alone can provide. It multitasks nicely on a 6Mb Amiga.

By default, *fMSX2* allocates 512K for its recently-translated code cache, and 16K for a 'Hash table' to track it. That's plenty for most game cartridges, but you can boost both as necessary from the 'Z80 settings' window.

For the first time, speedy Amigas can outrun TurboR MSX2+ systems, the ultimate expression of the MSX development, up to eight times faster than the original thanks to Z80-compatible R800 RISC processing. Even stock A1200/'020s with fast memory can emulate games at full speed.

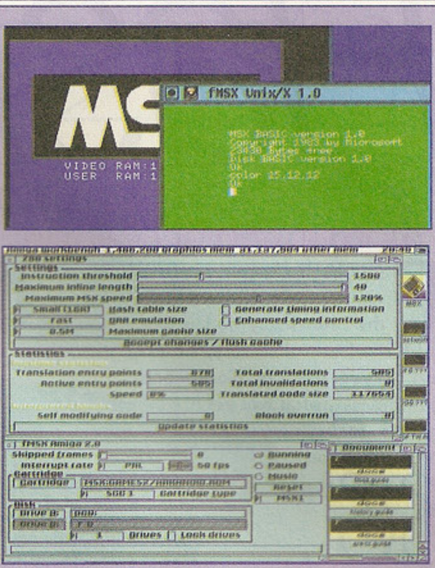
TESTING

fMSX boasts 150K of well-written documents in four AmigaGuides and an AREXX port for remote control and configuration. It doesn't need an installation bar assignment of fmsx: to launch applications from Workbench icons. Otherwise use requestors or Select All Files and drag and drop to the Workbench control window. Copy the emulator from CD and create a configuration file to prevent initial 'file not found' errors on cartridge and disk names.

fMSX2 runs virtually all the MSX1 software on the *MSX Nostalgia* CD at once, and is compatible with most of the larger ROMs, 128K and upwards, for MSX2. You may need to cross-reference the cartridge type with the guide, or reload after another has gone awry.

The defaults are apt and nothing actually crashed the Amiga or emulator tasks, as distinct from the emulated MSX. Very few cartridges stubbornly refuse to work, resetting repeatedly or showing corrupt graphics.

fMSX2 handles one or two digital joysticks with an MSX mouse option, Amiga mouse switching and retargeting for MSX joystick 1. A memory window allows RAM pokes and there's a semi-automatic cheat finder, but beware that this gets stuck, sapping Amiga CPU power and stopping emulation if started without a seed.



fMSX2 puts responsive windows on Workbench.

fMSX2 lacks direct cassette input code but can read MSX tape images. It can access original MSX floppies via *CrossDOS* and a suitable drive, simulate 'temporary disks' from Amiga directories, and *RAMSX* allows fast MSX disk images in recoverable Amiga RAM drives. Microsoft MSXDOS operation requires COMMAND.COM and MSXDOS.SYS on real 360K or 720K MS(X)DOS disks. *fMSX2* also supports Cyrillic and 8192-code Japanese Kanji characters as many MSX releases were in markets that don't use Roman letters. The environment details in the MSX2 battery-backed RAM are stored in an Amiga file.

Besides PSG and SCC, *fMSX2* offers nine-channel FMPAC plug-in sound, currently via *AHI*, but soon through Concierto OPL3 hardware. Future MSX2+ modes with up to 19,628 colours will require AGA Amigas or graphics cards.

This CD also includes *Amiga fMSX 0.6* and *0.8* (twice) and three versions of erstwhile rival *AmiMSX*, compared in *AF93*. *AmiMSX* updates from 2.3 require AGA. The CD has the registered version 2.51, without the essential keyfile. Versions 2.1 and 2.3 are demos which have a five minute time limit.



Elementary Double Dutch from *MSX Nostalgia*, Ja?

AmiMSX runs fast on 68020 and 68030s, but dislikes the copyback cache on later processors. It's quite comprehensive, $30 Shareware, but less system-friendly than *fMSX* and lacks some MSX2 features. *fMSX2* is superior unless you're stuck with Kickstart 2 or trying to squeeze everything into 2Mb RAM. The old *fMSX* may still be preferable on quick Amigas.



***Oriental Samurai* action comes naturally to *fMSX*.**

VERDICT

We deserve an MSX compilation CD to rival the Spectrum ones – MSX software was often superior, at least in graphics and sound – but sadly *MSX Nostalgia* isn't it. This is just a collection of games of dodgy legality, plus free and Shareware emulators; an MSX devotee could have collected far more.

You don't even get the FAQ or *AHI*. *MSX Nostalgia* is thrown together and there seems to be a hole in Epic's shovel. If MSX is just a passing interest, you may be better off with Freeware *fMSX2* and *Flash ROM 2* instead, which contain more than half of the games which are included on this CD, plus other emulators.



***Ashguine* action on MSX2.**

SUPPLIER: Epic Marketing, 0500 131486
http://www.epicmarketing.ltd.net
PRICE: £9.99
REQUIREMENTS: 32-bit Amiga with fast memory and CD drive

Pros and Cons

- \+ Workbench-friendly, including Amiga *fMSX 2.0*.
- \+ The biggest MSX game collection yet on CD.
- − Disorganised with many duplicate files.
- − No MSX documentation or disk images.

OVERALL VERDICT:
A missed opportunity but okay for MSX gamers.

58%

Flash ROM 2

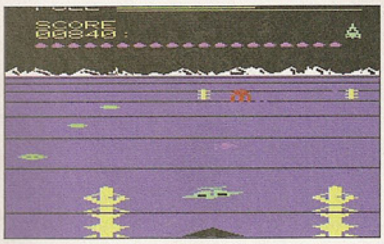
Simon Goodwin wades through the latest Flash ROM collection.

Flash ROM 2 comprises 670Mb of emulation archives culled from the Internet, aimed at Unix, Mac and Wintel, as well as Amiga users. Don't expect icons or Workbench-friendliness – what you get are piles of archives, including some old versions and duplication.

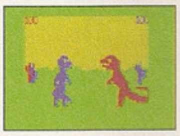
> Don't expect Workbench-friendliness – what you get is piles of archives, including old versions and duplication.

The CD contains over 250 C64 games, A64, Frodo and Magic64 emulators, and lots of demos too. The Amiga VIC20 0.65 is featured, with ROMs and some 60 common games. Oric aficionados will appreciate *AmOric 1.4a*, copious history and information culled from the web and about 3Mb of Zipped software, with GIFs to show you what to expect.

Commodore 64 emulation is prominent on *Flash ROM 2*.



Revisit *Buck Rogers' Planet of Zoom* with a VIC emulator.



The Jurassic classic *DinoWar* for Dragons and Tandy's CoCo.



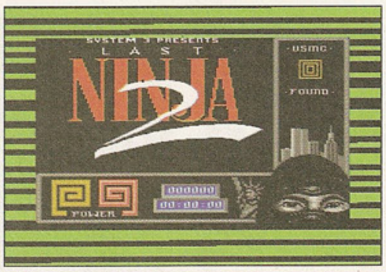
Games like *Aleste* demand an up-to-date MSX emulator.

250 Atari 8-bit games and disk images accompany good Atari 800 emulators for Amigas from Fenton and Firth. There's one tiny ST emulation hack, one spoof and *ST4Amiga.lha*, which can unaccountably be found in the '8-bit Atari' drawer.

Over 700 ZX-81 titles include small games, utilities and High Res programs. There are 150+ Coleco ROMs but no Amiga emulator, as a decent one only recently arrived. One DREaM archive is corrupt but the later 1.02 is okay. You get hundreds of Dragon games and dozens for Amstrad CPCs, but none for the Spectrum, which is well-served on dedicated CDs. Amiga Apple 2 emulators appear, but there are no example programs for those either.

Oddly there's no *ShapeShifter*, although you do get a current Amiga *Qdos* (unlike *Flash ROM 1*'s Neanderthal version), but sadly no example QL programs. PC *Qdos* emulator *QLAY* is filed under Spectrum Support, surely signifying Shovelware.

The CD includes MGT Sam emulators for Mac, MS-DOS and Unix, sadly unavailable to Amigans. '500 Amiga games' are compilation ADF images: mostly Assassins PD, plus a Workbench 2/PARnet system disk.



Authentic loading stripes to savour in Commodore 64 emulation.

MANY GAPS

Flash ROM 2 includes the slothful *VGB*, but none of the decent Amiga GameBoy engines, and only two GameBoy games. The port of FMSX included is ancient, eclipsed by FMSX 2, or even v1.4, itself over two years old now. However, the CD has over 200 FMSX-compatible programs. *ABeeb* lacks the vital OS or *BASIC* ROMs.

There are obvious gaps, besides old versions. *Flash ROM 2*'s Amiga coverage is weak, lacking native versions of *UAE* or the 2600, ZX80 or ZX81 emulators for the Amiga, though it includes compatible applications.

The Amiga Sega and TRS80 emulators are missing; there's no sign of the three Spectrum 128 emulators for Amigas, no Jupiter Ace and no Nintendo 8-bit emulators either.

OVERALL

Flash ROM 2 includes good stuff unseen on Aminet or *AFCDs*, but also some dross. Purchasers are going to have to dredge through the lot because the anonymous publishers haven't checked or organised the files particularly well. However, if you like emulators, you'll find plenty of treasure on this CD.

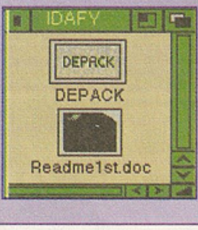
DAFY DISK

Epic's *IDAFY* costs £2 with this CD. The name optimistically stands for 'I Do Anything For You', but it doesn't.

In theory you drag files from the CD to *DEPACK*, a Workbench appicon, for *IDAFY* to identify and process appropriately. For instance, .doc and .txt files load via *PPMORE*, mysteriously leaving a window labelled "Decompactage en cours", then sulking until that's manually closed. Raw .html files zoom past in a Shell window.

Many of the emulation data files are in .zip format, unrecognised by *IDAFY* which bleats "caution: filename not matched: ram:" from its Shell. Ubiquitous .tar Tape Archives are also unsupported, though easily decoded by Amigas. Guide and .Text files are dismissed with "Le suffixe est inconnue" or "Ce fichier n'a pas de suffixe".

Epic pitch *IDAFY* at people who can't otherwise unpack an *LhA* to RAM: or view a GIF, and thus far it works. *IDAFY* includes essential Shell tools but its front end is inadequate. This CD isn't easily browsed on a standard Amiga, menu-selecting Show All Files for each subdirectory among so many. Use *Directory Opus* or something similar or you'll go mad.



SUPPLIER: Epic Marketing, 0500 131486
http://www.epicmarketing.ltd.net
PRICE: £14.99
REQUIRES: CD drive, extraction software (*LhA*, *UNZIP*, etc)

Pros and Cons

- \+ Large Atari 8-bit, C64, Dragon and ZX-81 collections.
- \+ Wodges of CPC, Coleco, MSX, Oric and VIC stuff.
- − Some games included may not be Public Domain.
- − Few concessions to convenience for Amiga users.

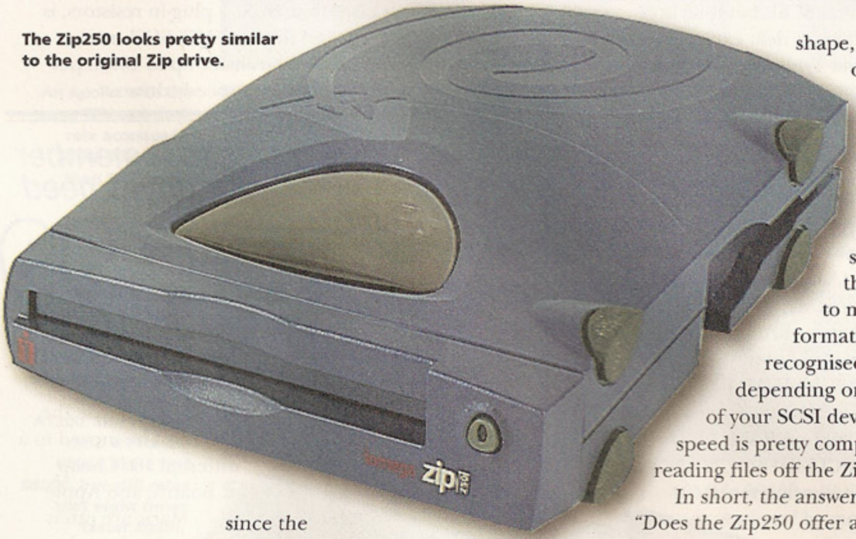
OVERALL VERDICT:
Mostly PC Shovelware but could still save much downloading time.

64%



Zip 250

The third in the Zip range, this one offers more storage space, but does it offer anything else? **Ben Vost** investigates...



The Zip250 looks pretty similar to the original Zip drive.

At first glance you'd easily mistake the Zip250 for its smaller brother. Cased in the same blue plastic, the family resemblance is undeniable. However, instead of the familiar two lights on the standard Zip we only have a light in the eject button, and instead of what seemed luxurious lines when the original Zip came out, but actually turned out to be quite rectilinear, we now have the smooth curves of the Jaz 2. If anything, the drive is somewhat lighter than the original Zip, but still has the limitation of only two SCSI IDs.

But what of the media? Well, the Zip250 takes the standard Zip disks with no trouble, recognising them just as easily as its own native 250 million-byte carts (I hesitate to say 250Mb rather than 250 million bytes because they only format to about 238Mb). However, putting a 250Mb disk into a standard Zip drive is a recipe for a disaster.

> *The Zip250 takes the standard Zip disks with no trouble, recognising them just as easily as it's own native carts.*

Working out the distinction between the two formats might be tricky since the only noticeable physical difference between the disks is that while the Zip100 has a prism affair in the corner of the disk, the same corner on the Zip250 disk looks like it's been filled with chewing gum. Green chewing gum.

Other than that, the disks feel the same, seem to weigh the same and look the same, so it's only the saving grace of having a big yellow label on the Zip250 disk that has "250" written all over it that saves the day.

As with the Jaz2 drive, it would have been sensible of iomega to make the disks somewhat different – still the same shape, but with a lump on a Zip250 disk that would mean it wouldn't fit in a Zip100 drive.

In performance the Zip250 seems much like the original Zip to me. RDB-formatted Zip disks get recognised or don't, depending on the capabilities of your SCSI device, and the speed is pretty comparable for reading files off the Zip250.

In short, the answer to the question "Does the Zip250 offer anything over and above increased storage?" seems to be "no". iomega have removed the parallel capabilities found in the ZipPlus which seemed to cause more problems than they solved, and reckon that they've upped the read speed of the drive to 1.7Mb, but little evidence of this could be found. Even so, the Zip 250 offers significantly more space to hold files on a disk, and the disks aren't more than double the price of their 100Mb counterparts, making this drive good value for money.

SUPPLIED BY: iomega
http://www.iomega.com
AVAILABLE FROM: Power Computing
PRICE: £189.95 (disks cost £19.95 each)

Pros and Cons

- \+ Increased capacity.
- \+ Slightly faster.
- \+ Better looks.
- \- Slow write speed to Zip100 disks.

OVERALL VERDICT:
Great for your own data, slow to share with others.

80%

SPEED DEMON

While reading files on a Zip250 is only slightly faster than off a Zip100 for either 250 or 100 disks, writing speeds are definitely different. We got the following results by copying a large, dense file (an 80Mb *LZX* file) to and from the combinations of Zips we have here in the office. The Zip was formatted using *HDInstTools*, with a standard 512-byte block size and the normal 30 buffers. The hard drive is an IDE drive with the same 512-byte blocks but with 250 buffers. The Zip drive was controlled by an A4091 SCSI II controller, the hard drive by the A4000's built-in IDE controller.

READING:

Zip250:	0.879Mb/sec (1:31.36 to copy the file from the Zip to the hard drive)
Zip250 (with Zip100 disk):	0.689Mb/sec (1:55.84, rounded up to the nearest second)
ZipPlus:	0.689Mb/sec (1:55.60, rounded up)

WRITING:

Zip250:	0.452Mb/sec (2:57.52, rounded up)
Zip250 (with Zip100 disk):	0.085Mb/sec (15:33.88, rounded up)
ZipPlus:	0.322Mb/sec (3:34.88, rounded up)

Obviously, better results can be achieved with more buffers, bigger block sizes and so on, but this is an interesting result, particularly the 85K/sec that a Zip250 gives writing to a Zip100 disk. Timing results were generated using the Unix *Time* command.

Typhoon Mark 2

Simon Goodwin compares the Mark 2 Typhoon with other A1200 accelerators and judges the merits of its on-board SCSI interface.

The Typhoon Mark 2 comes from DCE in Germany via Power Computing. This is the latest version with integral SCSI, but it lacks the on-board RAM and neat external port of the original Typhoon. The four-layer board is densely packed, with 10 chips on each side. The FPU and disk controller are socketed, with everything else surface-mounted.

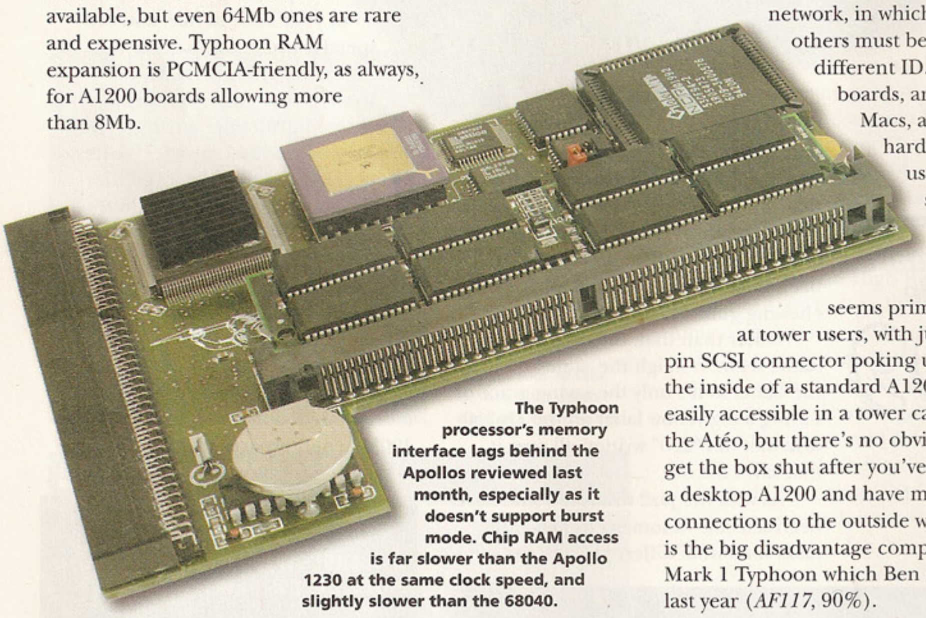
Once again, Typhoon uses a SCSI 2 FAST interface chip made by NCR. This resembles the Mac controller, rather than the later DMA co-processors used on top-notch boards. Typhoon 2 has one 32-bit SIMM socket for RAM expansion up to 64Mb. This could potentially accommodate 128Mb SIMMs if available, but even 64Mb ones are rare and expensive. Typhoon RAM expansion is PCMCIA-friendly, as always, for A1200 boards allowing more than 8Mb.

Jumpers configure SIMM size, refresh type (to suit Apple variants) and SCSI termination. Active termination, rather than SCSI 1 plug-in resistors, is preferred for the FAST SCSI mode, which could transfer up to 10Mb per second between speedy drives.

> **"The vital things to remember are that all your drives need distinct ID numbers, usually set with back-panel switches."**

The SCSI interface is fixed at ID 7, which isn't a problem unless you want to connect machines via a short SCSI network, in which case the others must be moved to a different ID. Cheap boards, and Apple Macs, are often hardwired to use ID 7 to simplify their circuits.

This unit seems primarily aimed at tower users, with just one 50-pin SCSI connector poking up towards the inside of a standard A1200. It's easily accessible in a tower case such as the Atéo, but there's no obvious way to get the box shut after you've put it into a desktop A1200 and have made SCSI connections to the outside world. This is the big disadvantage compared to the Mark 1 Typhoon which Ben reviewed last year (*AF117*, 90%).



The Typhoon processor's memory interface lags behind the Apollos reviewed last month, especially as it doesn't support burst mode. Chip RAM access is far slower than the Apollo 1230 at the same clock speed, and slightly slower than the 68040.

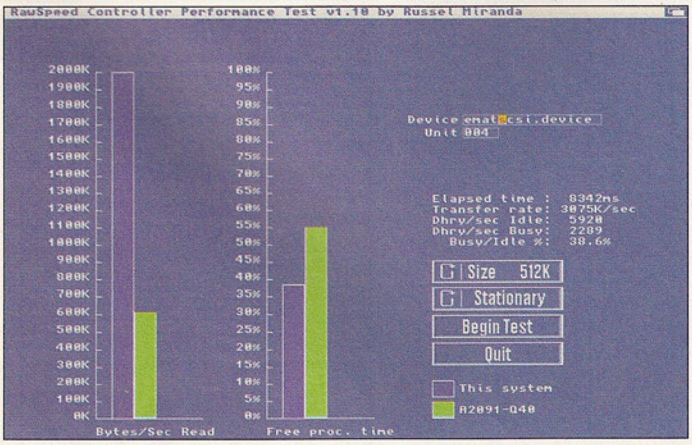
Typically, the trapdoor expansion is too big to comfortably accommodate the plastic panel which fits under the Amiga. You can make it fit properly by filing down the panel's ribs to clear components on the board, but many users opt to leave the trapdoor open, improving the heatflow around the components. The board is clocked at 40MHz, the 68030 has a heatsink and the FPU is located in a high-dissipation PGA metal package, so overheating shouldn't be the problem which it can be on faster boards.

The final jumper disables the entire accelerator, leaving you with a bare 14MHz 68020 A1200 with only chip RAM, PCMCIA, IDE and floppy, as if there was nothing in the trapdoor slot. This suits badly-written games that can't cope with extra speed or 32-bit addressing. The jumper points could be connected to the Turbo button on a tower case, though you can't switch back and forth without resetting the machine as Amiga OS doesn't take kindly to switching processors on the fly.

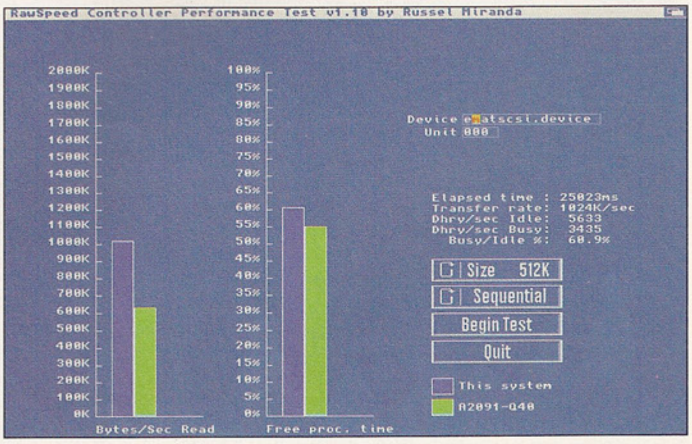
SCSI PERFORMANCE

The Typhoon incorporates an autoboot ROM so, unlike Classic Squirrels or Vipers, you don't need a floppy or IDE drive to get it started. If you do ditch IDE, you should seek out patches from Aminet and our CD to eliminate the startup delay while the Amiga looks for IDE drives, especially on Workbench 3.1.

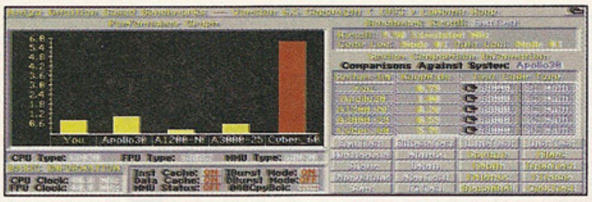
There's a delay of about a minute while the SCSI bus checks IDs 0 to 6 in vain if you run it without connecting any drives, but if you're doing that, why buy



Typhoon SCSI transfers on a 1Gb drive overflow the *RawSpeed* scale, tailored for Zorro 2 and A3000 tests, but clobber CPU performance.



An 80Mb Apple drive delivers around 1Mb per second and leaves most of the CPU time intact.



AIBB's emulator test rates Typhoon 2 four times faster than a stock A1200, between the A3000 and Apollo '030, and at a seventh of the speed of a CyberStorm 2.

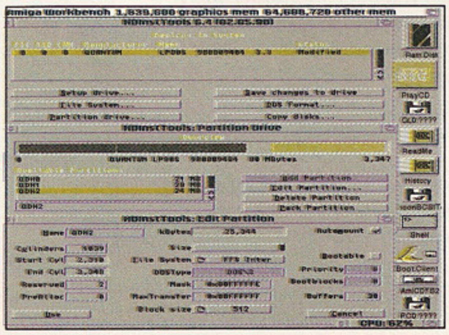
a Typhoon? The system starts quickly if you give bootable drives low ID numbers and set the 'last device' flag on the final boot drive so the Amiga doesn't wait in vain for boot information from scanners, CD and DAT devices with higher IDs. The maximum of seven devices should be enough for most people and the generous SCSI cable rules make it practical to approach this limit.

The vital things to remember are that all your drives need distinct ID numbers, usually set with back-panel switches or jumpers, and pin 1 (by the cable stripe) plugs in towards the middle of the board. Also make sure that the final drive on the 50-way cable is terminated. The jumper on the board should normally be closed, to terminate the other end of the chain, but there's nothing to stop you putting the interface in the middle of a cable with termination at both ends if that simplifies wiring in your tower. If so, leave the interface's termination jumper open.

SCSI 2 FAST interfaces should offer three times the throughput of the IDE or PCMCIA ports, but the Typhoon 2 controller hands the 68030 a lot of work when drives are active. My 1Gb IBM drive managed 3.3Mb per second, but sapped two thirds of the Typhoon's speed in the process.

Even 128K stationary reads devoured half the CPU time, delivering 2,403K per second. The difference indicates time spent seeking data when the 68030 can get on with other things. A smaller SCSI drive, rescued from a dead Mac, managed just 1Mb per second, leaving 61% CPU free.

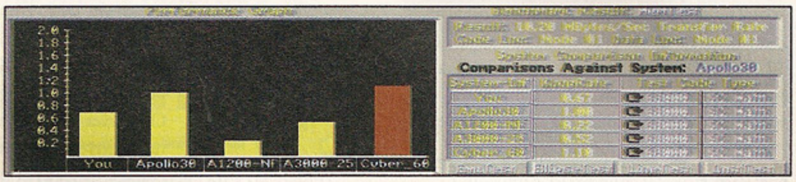
The Typhoon comes with a support disk of PD utilities, convenient if you're using removable drives such as Zip or Syquest, and *AmiCDFS2*. This needs no Shareware ATAPI device as the superior ematscsi.device is linked from ROM as soon as you turn on the Typhoon system. Oliver Kastl's *HDinstTools 6.4* combines the functions of *RDBsalv* with Commodore's *HDToolbox*, *FORMAT* and *COPY*, adding support for password protection, big drives (via *TrackDisk64* and *NSD*) and optional 'head parking' when drives remain idle for five minutes or more.



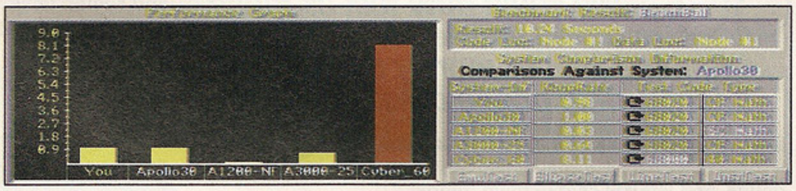
The Typhoon 2 comes bundled with *HDInstTool* and *AmiCDFS2*.

32-BIT SIMM RAM SPEEDS COMPARED BY BUSTEST (in Mb/s)

SYSTEM	READ Word	READ Long	READ Multi	WRITE Word	WRITE Long	WRITE Multi
Access						
Typhoon 2 A1230/40						
Standard	12.8	19.0	18.5	10.7	21.5	21.5
Chip RAM	2.2	4.4	4.4	2.2	4.4	4.4
Apollo A1230/40						
Standard	14.2	22.3	24.6	15.6	31.1	34.9
Std+Burst	16.4	27.4	21.9	15.6	31.1	34.5
Chip RAM	3.5	7.0	6.2	3.5	7.0	7.0
Apollo A1240/28						
Burst+MMU	34.2	38.1	35.4	22.4	23.0	22.6
Chip RAM	2.3	4.6	4.6	2.3	4.6	4.7



An Apollo with the same CPU and clock rate accesses its SIMM 50% faster than Typhoon 2.



The Beach Ball rendering test puts Typhoon neck and neck with Apollo, 30-odd times faster than the stock A1200. The vintage *AIBB* treats the 68060 like a fast 68000, but still rates that eight times faster again.

SUMMARY

The Typhoon Mark 2 would be unexceptional if it wasn't for its built-in SCSI interface. This could justify choosing it over a processor-only accelerator, unless phase 5's true DMA Blizzard 1230 is revived, once you've solved the problem of making connections to your SCSI drives.

Typhoon SCSI can outrun Squirrels and the motherboard interface because the controller doesn't have to squeeze data through the PCMCIA or IDE port. SCSI facilitates DAT drive backups, CD writing and the serious use of scanners, as well as CD-ROM, fixed and removable hard drives.

SCSI peripherals potentially outperform IDE or (worst by far) parallel port devices, but you need an intelligent DMA controller to see the full benefit. SCSI still commands a slight price premium but it's worth the extra; with DAT drives now available at around £50, there's little excuse for being caught without a backup.

The Typhoon's RAM interface is cautiously specified, but this allows more leeway for slow SIMMs. It's less fussy than the Apollos, even supporting the weird refresh pattern of Apple memories. It's a pity it just has one SIMM socket, especially as its internal SCSI connector suggests it's aimed mainly at tower users.

40MHz 68030 and 68882 processors are unexceptional by modern standards but they're adequate for Internet and Workbench activities and are compatible with most A1200 games. The MMU helps to track any program bugs and it can also boost emulation and Kickstart.

If you're into heavy rendering of sound or graphics, whether 3D, *AHI* or JPEG, you need to weigh the advantage of onboard SCSI against costlier rivals which have more bandwidth and processor power.

SUPPLIER: Power Computing 01234 851500, http://www.powerc.co.uk or http://www.dcecom.de
PRICE: £89.95
REQUIREMENTS: Amiga 1200, SCSI drive(s)

Pros and Cons

- + Built-in FAST SCSI controller.
- + Can support a 128Mb SIMM.
- − No external SCSI connection.
- − Disappointing bus bandwidth.

OVERALL VERDICT:
A plausible choice for A1200 SCSI towers.

72%

STRICQ: An Interview with Douglas McLaughlin

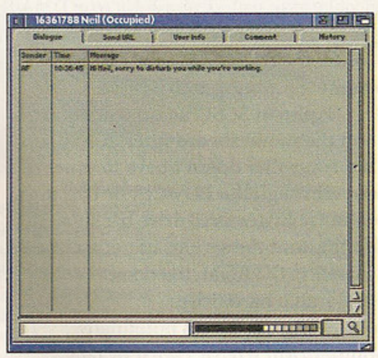
Ben Vost talks to the man who's trying to make talking on the net easier.

The *ICQ* program is becoming increasingly popular with Amiga users on the net, and we use it here ourselves. But it's surrounded in mystery because of the fact that its author, Doug McLaughlin, doesn't really want to attract unwelcome attention from its inventors, Mirabilis, especially now they're owned by multinational ISP AOL. In case you don't know, *ICQ* is a tool that enables you to check to see whether your friends and contacts are online, and lets you chat to them, send them files and so on. We had a chat with Douglas McLaughlin, the author of the Amiga's premier port *STRICQ*.

> ...we could now talk as much as we wanted to, without spending a lot of money on international phone calls...



The main window is as customisable as *MUI* programs usually are...



The chat window usually has a lot more going on in it than this.

CONTACTS

STRICQ: http://www.owlnet.net/Amiga/stricq
Doug McLaughlin: UIN: 8083608
Amiga Format: UIN: 20459449

AF: What attracted you to writing a port of *ICQ*?

DMcL: In the first few months of 1998, my brother and mother started using *ICQ* on their PCs to chat in real-time and they kept telling me to get the program so I could talk as well. This was especially important to my mom, living in Texas, and myself being in the US Air Force and stationed at Kadena AB, Okinawa, Japan. At the time I didn't have any other computer than my Amiga 3000 and my wife's Amiga 2000 and couldn't enjoy the benefits of *ICQ*.

Then I started hearing about the Official *AmigaICQ* effort and started following their website's news updates. This became increasingly frustrating as it was soon obvious that this effort was going nowhere. This was when I started thinking about writing my own version.

AF: How long have you been writing the *STRICQ* program?

DMcL: I started searching on the web early in June 1998, going to different web search sites, and after about about a week I found some hits pointing to some messages talking about how to hack and spoof the *ICQ* clients. One of these messages pointed to a website that had just been set up with preliminary information on the *ICQ* protocol packets. I started writing *STRICQ* during the second to last weekend in June, and by the end of the next weekend I had a version of *STRICQ* that could log in, send and receive messages. Of course, I was talking to my mom and brother right away, using them to test the program.

They loved it that we could now talk as much as we wanted to, without spending a lot of money on international long distance phone calls.

AF: I know anyone who's read the FAQ will know, but can you tell everyone else why it's called *STRICQ*?

DMcL: The letters ST and R have prefaced every program that I've written, starting with the Commodore 64 back in 1986 when I first released *ST/R BBS* and *ST/R Term*. ST stands for *Star Trek* and the R stands for *Robotech*.

These were my two favourite TV shows at the time. When I moved from my C64 to my Amiga 3000 in 1990 I had to drop the slash because it's a directory marker, something the C64 didn't have.

AF: Have you had any contact or help directly from Mirabilis in creating this Amiga client?

DMcL: None whatsoever. I think their attitude towards externally created clones became very evident during the first few months of 1998.

AF: So how have you done it?

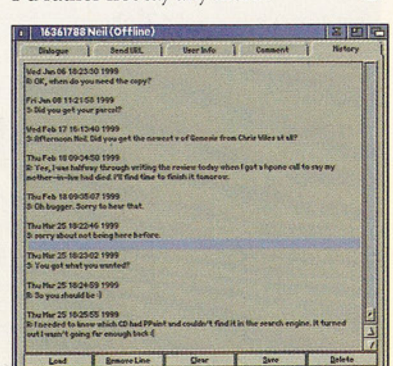
DMcL: There are several sources of information on the Internet and several clone authors, including myself, have pooled our knowledge to help make each client better and more compatible.

AF: What plans have you got for the future of *STRICQ*?

DMcL: Most of my plans for future enhancements come from user suggestions on the *STRICQ* support mailing list. My largest current plan is to move from the old protocol version *STRICQ* currently uses to the latest protocol which is used by the new *ICQ99a* clients.

AF: Do you intend to try to get "official" status for it at any point?

DMcL: There may be something developing in this area, but at this point I'd rather not say any more.



Here's the history of what I was talking to Neil about.

Power 2x CD-ROM

Reader Reviews

Danny Shepherd takes this CD drive for a spin

Power's *AF* Gold award winning CD-ROM drive doesn't require hacking your machine apart. In fact, you won't need any common (or uncommon, for that matter) tools because it comes complete with HiSoft's innovative Squirrel SCSI PCMCIA interface. So not only will you have a nice new CD-ROM drive, you'll also have a passport into the world of SCSI, although the Power CD-ROM has no through port so it must go on the end of the chain.

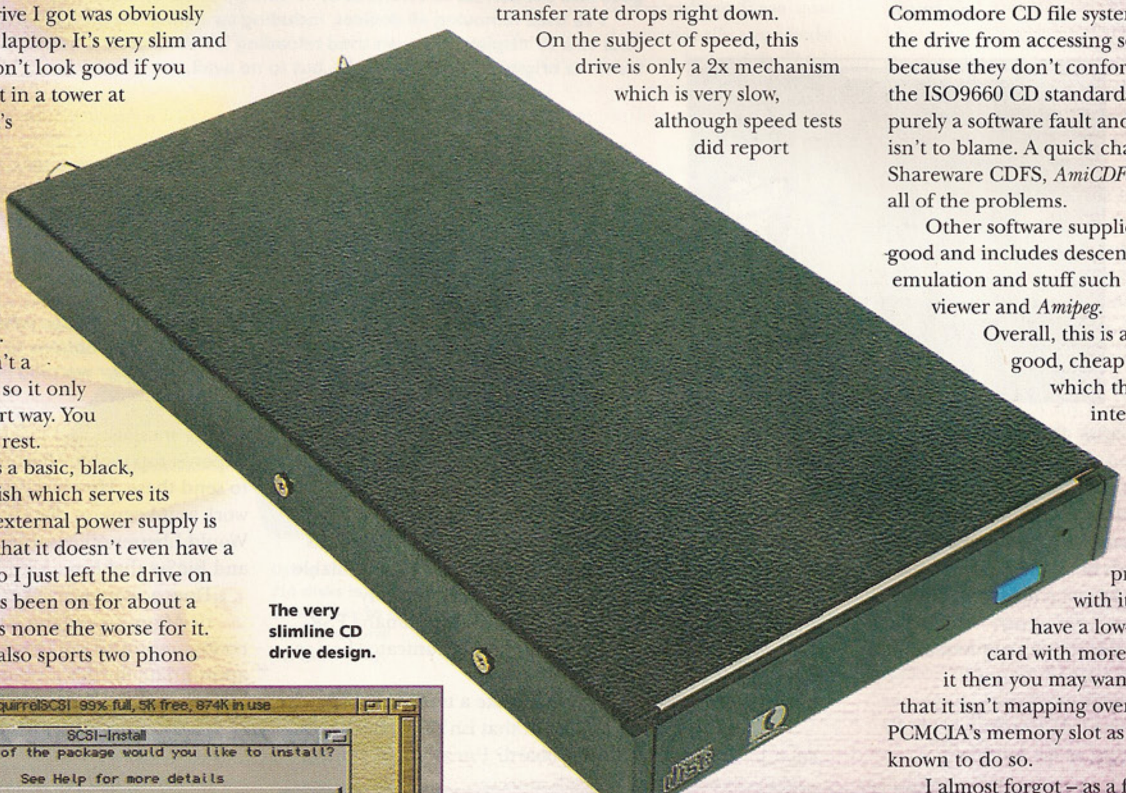
The CD drive I got was obviously designed for a laptop. It's very slim and black which won't look good if you decide to put it in a tower at a later stage. It's also the only drive I've ever seen where the entire mechanism pops out when you press eject. The drawer isn't a servo type and so it only pops out a short way. You have to do the rest.

The case is a basic, black, hammered finish which serves its purpose. The external power supply is very sparse in that it doesn't even have a power switch so I just left the drive on all the time. It's been on for about a year now and is none the worse for it.

The drive also sports two phono connectors for the audio which can be fed into speakers, or you might want to run it through a mixer so that your Amiga's audio comes through the same speakers. The audio playback is surprisingly good for such a cheap mechanism and it tolerates damaged disks much better than my cheap audio CD player. It also tolerates damaged CD-ROM disks too, although the transfer rate drops right down.

> "The audio playback is surprisingly good for such a cheap mechanism and it tolerates damaged disks well."

On the subject of speed, this drive is only a 2x mechanism which is very slow, although speed tests did report it operating at speeds just above the 2x standard. The only applications that will suffer from 2x drives are spooling anims; icons on the Workbench will appear quickly enough.



The very slimline CD drive design.

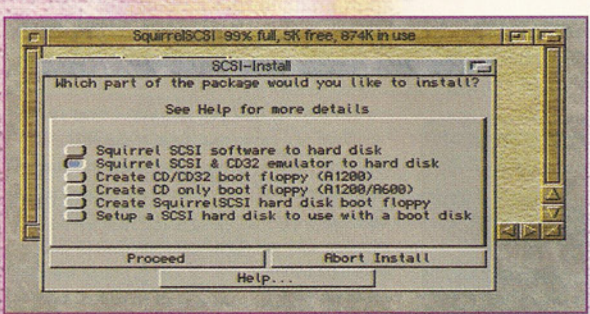
The drive is a Toshiba mechanism, which is known to be reliable, and is set up to use SCSI ID 3. This can be changed by setting the required jumpers. Unfortunately, they can only be accessed by opening the drive. This probably won't pose a problem as if you had any conflicting devices you wouldn't be buying the bundle.

The major downside for this bundle is the software. Power used the official Commodore CD file system which stops the drive from accessing some CDs because they don't conform exactly to the ISO9660 CD standards. This is purely a software fault and the drive isn't to blame. A quick change to the Shareware CDFS, *AmiCDFS*, will sort out all of the problems.

Other software supplied is pretty good and includes descent CD^{32} emulation and stuff such as a *PhotoCD* viewer and *Amipeg*.

Overall, this is an extremely good, cheap bundle, of which the SCSI interface is the most expensive component. I've never had any problems with with it at all. If you have a low-tech RAM card with more than 4Mb on it then you may want to check that it isn't mapping over the PCMCIA's memory slot as some are known to do so.

I almost forgot – as a final bonus you also get two free CDs with the drive, both of which are games.



BEN'S VERDICT

Although Power's cheap CD was praised for its cheapness back at the start of last year, it's starting to look positively expensive these days, considering how cheap very fast ATAPI CD-ROM drives are, even with external casing. All the same, having access to the possibility of multiple SCSI devices can only be a good thing.

YOUR REVIEWS

Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

We will also need some good photographs of any hardware you review and a passport photo of you. Send your reviews to:
Amiga Format • Reader Reviews • 30 Monmouth Street • Bath • Somerset • BA1 2BW.

SUPPLIED BY: Power Computing
PRICE: I bought mine in February 1998 for £79.95

OVERALL VERDICT: A great drive at a fairly cheap price, let down by poor software support.

90%



Workbench

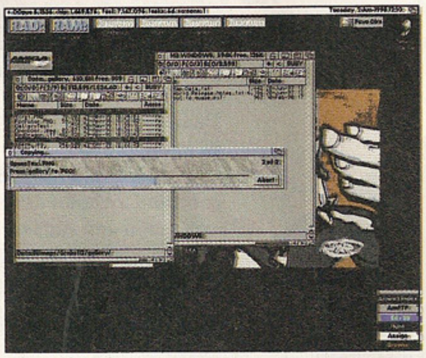
Technical queries solved by John Kennedy. Email: amformat@futurenet.co.uk, putting Workbench in the subject line, or write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

MS? MUSTN'T SAY!

Here's a very basic question from a "not as young as I would like to be" novice. I'm trying to extract a picture file from a PC-formatted floppy. Is the MS-DOS set up in the *CrossDos* program the correct way to go? I assume the MS stands for Microsoft but I can't actually see it written anywhere.

Terry Davis
via email

You probably won't see it written anywhere either, as the Lawyers of Bill are always lurking where you least expect them. Yes, CrossDos *is the utility to use. It'll mount a new virtual device which can read and write to 720K MS-DOS-formatted floppy disks.*



***CrossDos* is just what you need for copying PC files.**

MODE CHANGE

I have an 18Mb Amiga 1200 running Workbench v3.0, 68030 Typhoon processor, 260Mb hard drive, 32x IDE CD-ROM and a 15" VGA monitor connected with a Scandoubler. Whenever I boot up, I get the following message: "Intuition is attempting to reset the Workbench screen. Please close all windows, except drawers – Reply Retry or Cancel".

It happens just around when it executes the IPREFS command. I can't progress any further with the boot until I hit Cancel, then it does one of two things: the screen goes to four-colour screen in PAL mode, which I have to reboot from, or it goes into the correct screenmode of 16 colours in VGA mode.

I've tried removing all devices, including swapping the hard drive and reverting back to a TV display. I've even tried reloading ENVARC: prefs & startup-sequence from the original Workbench disks, but to no avail.

Andrew Wells
Bookham

During the boot process, your Amiga is trying to change screen modes. However, another program has opened a window, and before it can close and reopen the screen, this window must be closed. Looking at your startup-sequence, I can see the following line:

```
syspic dh0:syspics/l*.pic 1 25 2 fadein 8 fadeout 8 bf r=255 g=0 b=0
```

which immediately jumps out at me. Try commenting it out and see what happens. If this is the culprit, you should experiment with the various options to ensure it opens its display in the right mode. This should prevent your warning message.

PATCHING IT UP

Having a girlfriend who's singing and playing keyboards in an electro-band, I've been trying to make myself invaluable to her by using my A4000/'040 25MHz to help out her, and the rest of the band, with demo recording and sampling. Now I want to sequence the keyboard parts of their songs on my Amiga, as the internal sequencer of her keyboard doesn't have enough memory for storing all the songs.

However, unlike the sequencer of the keyboard, I'm unable to make sequences using the "right" sounds as only General MIDI sounds are available to me. I use *Bars & Pipes Pro.* My girlfriend's keyboard is a Yamaha PSR-520. I use a CD³² communicator box as a MIDI interface.

1 How can I make a track use an instrument that isn't GM, but exists on her keyboard? I'm aware of control change messages and I've been using the Super Setup tool on *Bars & Pipes* to try to send these. However, I can't make it work as it keeps on playing GM sounds. Would I better off trying Sysex messages and BigSys that came with *B&P*?

2 Does a sequencer like *Sequencer One* or *Music-X* need the same kind of configuration or will they be more appropriate for this kind of job?

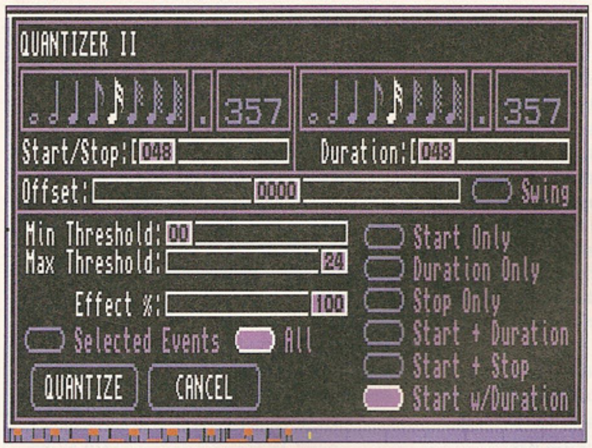
Tore Welde
Trondheim Norway

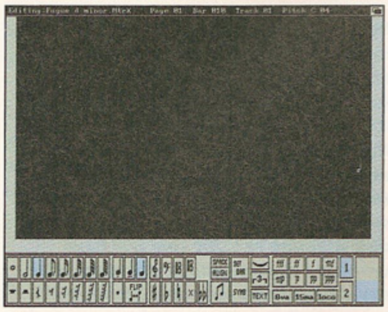


If your keyboard isn't General MIDI compatible, what do you do?

1 I'm hoping that you shouldn't have to get down to SysEx level. One of the first things to try is to change the program number on the keyboard, and check to see if Bars and Pipes *can capture that particular MIDI message. I'm not sure how exactly the PSR orders its internal voices, but if you can't reach the ones you want with GM messages, you'll have to start experimenting to see if you can send MSB/LSB Bank Select messages. It can get a bit messy, which is why capturing a program change is easier.*

If all else fails, it's out with the synth manual to work out the pattern of bytes you need to send it in order to select the other voices as a SysEx message. Not much fun I know, but often a blast of SysEx information





Other sequencers might not be as capable as *B&P Pro* when it comes to dealing with non-standard MIDI keyboards.

at the start of your tune is the only way to configure equipment.

2 Sequencer One *is probably a little basic for your needs.* MusicX v2 *is definitely my favourite sequencing tool, although it's very difficult to find these days. You'll find both have the same problem of addressing non-standard voices on synthesisers which provide them. In fact, if you can't find the SysEx values to send, you might have to stick with manually setting the patches. Sorry!*



Using PC-formatted Zip disks is the safest way to ensure cross-platform compatibility.

MUSIC MASTER

Just a short note about the Sound Advice column on sound devices. You mention in the feature boxout that you can use Minidisc for mastering and some more information on that would be very useful as I've recently purchased a Minidisc recorder.

One other point – although it's not that widely available any more, can you offer some advice on using the Miracle keyboard for MIDI use, etc? As well as the Amiga-specific serial port connections, it also has MIDI in and out sockets, plus a large section of in-built sounds. Along with the touch sensitive ability, I'm sure it would make a very useful addition if some information on accessing these functions was available.

They're pretty cheap to get too – I've see a couple on the net for around £100, and that includes the tuition software and cables, which isn't bad for a keyboard with full size keys and touch sensitivity. Apart from that, trackers aside, could you recommend any software that I could use for standard musical notation? I'm pretty old fashioned about writing my music and it's easier to send notational script to other musicians.

Nimrod
via email

Minidisk is a digital format and is therefore a useful, high quality recording tool. Although a lossy system, it's still high enough quality to be useful. The big question is what you plan on doing with your recordings. If you want them duplicated professionally, you should first ask your mastering house if they'll take Minidisc as an acceptable format. They might not, in which case DAT or CD-R are your best bets.

Both MusicX v2 *and* Bars and Pipes *have notation features, and* Bars and Pipes *at least is available free on the Internet if you know where to look.*

ZIPPITY DO DAH

In a few weeks I'll be getting a lovely Yamaha A3000 sampler. If I buy a Zip drive (SCSI 2) for the sampler, could I use it on the Amiga, i.e. getting lots of net stuff from the local cybercafe and then transferring it to my computer? Does it matter if the cybercafe's Zip drive is IDE?

I really need your help to get hold of *Music X v2*, boxed with manual, too. I've tried everywhere. Will it even work on my A600, 2Mb? If someone has a copy, please email me.

Finally, in the near future I'll be getting the fastest A1200 PPC I can afford, shortly followed by net access. I also have to pay £8 for the CD version of *AF* here in the Republic of Ireland but it's worth every penny.

Rocky
Rocky@cisl.ie

It doesn't matter than one drive is IDE and the other is SCSI. I've swapped discs between systems like this and it works fine. What is a problem is that each of the three systems in your Zip love triangle is going to use a different format: PC, Amiga and Yamaha's own Sampler Format, which may or may not be PC compatible. To share files between the PC system and the Amiga, you'll have to make sure your Amiga is configured to read the Zip drive as a PC device. You'll have to create a new MountList for it, using CrossDos *to read the files written to it by the PC.*

I'd definitely get net access before new hardware, just so I could shop around online for news, the latest prices and bug fixes. Perhaps the answer to the eight quid Amiga Format *is to subscribe, saving a lot of money, or you could always nip over the border to Newry and buy it there instead.*

HIGH SPEED

I have an A1200, an Apollo '060 accelerator with 32Mb of fast RAM and a 2.1Gb hard drive, running Workbench 3.1. I recently purchased a Zyxel Omni.net modem and I've had some problems entering the Internet. Do I need to get a high speed serial port?

Rune Kinnerod
Norway

That really depends on the nature of your problems. It would be easy to configure your Internet access software to talk to your modem at 19,200bps, for example, and wait for problems to occur. If they don't, maybe a faster serial port is indeed what you need.

If you still get problems, it could be that speed isn't the issue and that something else is to blame.

Feedback

Having read John Hart from Liverpool's query regarding his Blizzard 603e causing his A1200 to hang on bootup, I can offer some help as I had exactly the same problem.

I narrowed it down to *SetPatch* and cured the problem by moving it nearer the beginning of my startup-sequence. Hope it works for him too.

Gavin Williams
via email

DON'T LEAVE ME HANGING

I have a CD32 with an SX-1 and I've got the thing up and running with everything working well: the hard drive is running, the floppy drive is okay, the keyboard is fine and the FMV card is working with CDVideo films. Normal CDs and CD32 games are booting up and working as normal.

I've just hit a snag and I know its only a software hitch, not hardware. I use *Ami-FileSafe Pro* and my internal hard drive is 127Mb (in my SX-1). I'm using *RDPrep* to configure my HD as normal, as I've done loads of times before. When I'm trying to copy my Workbench 3.0 disks over to the HD (after formatting) it goes okay and then just stops. It just hangs there and won't do anything else.

I know this is only a *MaxTransfer* and/or DMAMASK setting. Do you know what settings I should use? One other thing: these are the Workbench disks from my A1200, which use a different Kickstart chip to the CD32. Would this make a difference? I've tried these settings: MaxTransfer 0x1fe00 and 0xf000 DMAMASK 0x1fffffff (7).

Ken Walsh
via email

How do you know for certain it's software and not hardware? I'm intrigued why you've had to prep and install your system "loads of times" – have there been problems in the past? I know that Ami-FileSafe *has been generally considered risky and, to be honest, it's this that I'd first point the finger of suspicion towards.*

Try setting up your system without using AmiFileSafe *to see what happens. More good news is that it's also possible that your hard drive is starting to fail. The fact that the disks are from your A1200 shouldn't make any difference: the Kickstarts are similar enough.*

Continued overleaf ➡

SNAIL EMAIL?

I have an A1200, 16Mb of fast RAM, Blizzard '030 at 50MHz, 540Mb IDE hard drive and a Dynalink 56K modem, all running on OS 3.0. My problem is with my modem. I'm using the email software called *YAM* and my problem is with getting mail from pop3 servers.

When I use FTP, or even the web, I manage to get CPS speeds of up to 40,00, but when downloading and uploading mail I sometimes don't even get 500cps. This is a very irritating problem, as you could imagine, and I'd be glad if you could help.

Mike Cardwell
via email



Your mail server might be to blame for slow loading times, rather than your modem.

As the mail and FTP systems use the same transport mechanism – that is, a TCP/IP stack operating over your modem's serial link – it sounds to me like the blame actually lies with the mail server your ISP is using. Perhaps it's seriously overloaded or perhaps it's not completely compatible with your email client and is operating with lots of errors (or "sub-optimally" as the Americans like to say). Try using your ISP at an obscure time to see whether using it when it's not as busy solves the problem.

Better still, try using another ISP (there are plenty of free ones about to experiment with) to ensure that it's not your Amiga which is to blame.

APPLE PRINTER

I would like to make use of my (expensive) HP Laserjet 6MP under Mac emulation (*Fusion/Shapeshifter*). This printer features both an Apple "local talk" and a parallel port.

I understand that I need to have an appropriate driver that redirects the serial output to the parallel port of the Amiga. Where can I find such a driver? I've tried emailing Microcode Solutions but I didn't get a reply.

Ben Hermans
Antwerp, Belgium

You need the printer driver which is mentioned in the Shapeshifter *documentation. It's called Chucks printer driver and you'll find a link to it at this very useful website:*

http://www.ozemail.com.au/~cyberwlf/MacEmul.html

DON'T TELL ME: DEAD DISK?

I have an A1200 (Power Towered), Blizzard '030 with 8Mb RAM, 4-way buffered IDE interface, 2.5" 540Mb HDD and a 24x IDE CD-ROM.

My problem is that my hard drive has died on me. A couple of days ago it loaded up Workbench (v3.0) fine, except that during loading it told me that my "Boot" partition (DH0:) had a read error. I didn't note down the block number but it may have been a two-digit number.

Once Workbench had loaded I ran *DiskSalv* on the partition but it found no errors and came up with nothing. The next time I booted up, the following day, it gave me two similar warnings regarding dodgy bits on "Boot" and refused to load up any more. I reset the machine and was greeted with the 'Insert disk' screen.

Resetting again, I accessed the Early Startup screen only to find that my hard drive partitions (DH0:, DH1: and DH2:) had vanished. Switching off and powering up again did no good, and while the hard drive wasn't working my A1200 refused to recognise my CD drive when I tried to boot it from floppy. Removing my IDE buffer from the setup didn't help – the problem remained.

I tried loading up *FastPrep* but it told me that there was no hard drive connected. I continued to reset the machine and try again (as I have previously had a problem with the angle of my HDD and hoped this might be related), and on one occasion the partitions reappeared on the Early Startup screen, but the next reset failed to boot the HDD. Since then my Amiga hasn't even acknowledged my hard drive's presence. It's as if there's nothing plugged into the IDE port on the motherboard.

Firstly, any idea what's happened? Also, assuming, as I am, that the files are still intact, is there any chance of retrieving them? I'm hoping so; I had recent work that wasn't backed up on the hard drive and it would be gutting to lose it. This is the first major problem I've had with my Amiga in over five years so it may have given me a false sense of security.

James Potter
via email

Ooh, nasty. It doesn't look good. It looks a lot like your hard drive has started operating in a mode of non-functionality. Or, to put it another way, it's broken. Assuming you've checked the obvious: loose cables, disconnected power or data plugs, drive being fouled by wires, then it really doesn't seem good. Hard drives do wear out: a disk spinning at 5,200 rpm will have problems at some point – the read error could have been your only warning. It's even possible a stray cosmic ray passed through one of the controller ICs and zapped it. Possible, but unlikely.

Try using* HDToolbox *to locate the drive and read its parameters. You can write these to the disk, and if you recreate the partition information exactly as before, this shouldn't lose any data. If the drive still fails to appear in the list of devices in the boot menu, I think it's time to consider the very real possibility that the worst has happened and the disk is dead.

BAD BUS CRASH

I'm having difficulty in getting my towered Amiga 1200 (board rev. 1D4) to recognise any Zorro cards with a MicroniK Zorro 2 busboard while a Blizzard PPC '060 accelerator is active.

If I disable the accelerator holding the number 2 key while booting the machine, the Amiga recognises the busboard and Zorro cards, but while active it can't find anything. What's the problem? Does it sound like a busboard incompatibility with the Blizzard accelerator? Do you know of anybody who has a functioning towered A1200 with a Zorro busboard (MicroniK/EZ4 busboard) which is working with an '060 PPC accelerator?

Joe Vitale
via email

Erk, that doesn't sound good. In fact, it sounds as though the bus system is just incompatible with the Blizzard. Perhaps there's a software patch to update the bus. Anyone out there know or have a solution?

DIY PARTITION

How do I make real PC partitions on my hard drive for *PC-Task* or *Emplant Deluxe*? The docs in *PC-Task* suck and the *Emplant* docs are too brief.

LAY IT ON ME...

Do you know where I can find layers.library? Thank you.

LaMoine MacLaughlin
Wisconsin, USA

It's been part of the Amiga Workbench release since, well, before release 2 anyway, so as far as I know it's in ROM:. This is very likely as it's quite a low level library. The Layers Library provides routines to manage overlapping rectangular drawing areas, so you can imagine how important this is to the ordinary Amiga for looking after windows. You can open it from within your programs, like any other Amiga library, using the OpenLibrary() function, like this:

```
sruct Library *LayersBase;
if (NULL!=(LayersBase = OpenLibrary("layers.library",33L))) { // Use the library CloseLibrary((struct Library *)LayersBase; }
```

I have a GVP '040/33, GVP Spectrum in a 16Mb A2000HD.

Tony Kowalski
via email

A partition is a way of logically dividing your hard drive into separate virtual drives. So, instead of your drive appearing as Workbench: on the Amiga desktop, it could appear as Workbench: and Work:. To you, and the Amiga, it's the same as having two separate drives, except that they're both on the same disk.

Using a utility such as HDToolBox, *you can edit existing partitions and create new ones. For example, to create a new partition you first reduce the size of the existing one and then add a new one. The total size of both partitions cannot exceed the capacity of the disk.*

Warning: if you alter the properties of an existing partition, everything stored on it will be lost. It isn't possible to resize a partition and retain data, even if there's plenty of free space on the disk.

SEND IN A REPLACEMENT

1 I have heard that I can use a replacement file system instead of the standard Workbench file system, which will eliminate hard disk validation errors. Does anybody at *Amiga Format* use a different file system? I'd like to know where to get hold of the software and whether it would be compatible with all my current Amiga software, including *Directory Opus*.

2 I bought a second hand CD³² over the weekend for £25 (bargain!). I was suitably impressed at how well the *Amiga Format* CDs work on it (excellent work and support from the *Amiga Format* Team). As there was no manual, I wanted to find out what the AUX port (next to the game ports) and the S-VHS port were for?

Mass Cerritelli
via email

1 Yes, there are various third party filing systems available, like PFS2 from Greed Development. Personally, I wouldn't use it. If you're getting a lot of hard disk validation errors, there has to be a reason. Maybe it's a failing hard drive, unbuffered IDE interface or a lack of power – I'd check all these before trying to solve the problem by using another file system.

2 The AUX port is a serial port and can be used for various purposes, such as linking the CD³² to another Amiga with a networking utility such as SERnet.

The S-VHS port outputs video which is suitable for display on an S-VHS compatible television set. S-VHS separates colour and brightness information, and as a result it gives a slightly better picture than you'll get on an ordinary video.

MORE CHIPS, PLEASE

1 I have an A4000T with a Cyberstorm PPC/'060 and CyberVision PPC, OS 3.1, 128Mb of fast RAM, a Zip and a Jaz drive, a CD-ROM, a CD-rewriter, 2.1Gb HD and a 1,200 dpi scanner. There's nothing really wrong with them, I just wanted to brag! No, seriously, I run a photo imaging business on my Amiga. I use *Photogenics 2a* for my graphics work, but when I'm working with very large image files (30+ Mb files) I keep getting a fatal error about running out of chip RAM. I have tons of fast RAM left and I use the graphics card to keep my system from using the chip memory for display, so how can I get *Photogenics* to use my fast RAM instead of my chip memory?

2 I keep having to reset my clock after I turn off my computer for more than five minutes. I figured it's a battery problem so I opened up my tower and located the coin-type battery at the bottom of the computer by the slots. According to my dealer and everything I've read, the battery should be held in place by a clip, yet mine seems to be soldered in or something similar and it won't come out. Any ideas?

3 My little brother bought my A1200 from me and he has one problem with it. His has an A1200 with a DKB Cobra 68030 card with 64Mb of fast RAM, OS 3.0, 170Mb internal IDE HD. His problem is with the Surf Squirrel he uses to connect a hard drive and CD-ROM to his A1200.

The chain is terminated correctly yet whenever we hook up the Squirrel it will have transfer problems, no matter what we have hooked up or in what order. For example, the HD will work fine, then the access light will come on and stay on and the drive is then locked up. He loves Amigas, so please tell me how to solve this problem.

Bob Gilbert
Grove City, Ohio

1 Make sure that* Photogenics *is using the right kind of video driver and is using the video card directly, rather than re-directing the screen by a mode promotion utility. Many graphics cards will store graphics data outside the chip RAM space, thus preventing the memory problems you experience. Also ensure that blitter operations are turned off (for the blitter to work on data, it needs to be in chip RAM) and switch off the Workbench display in the background.

2 If the battery really is soldered into place, you'll either have to snip it out or unsolder it, both of which are scary operations. Once removed you can attach a new battery with similar specifications.

If this is too much, your local PC dealer should be happy to do it for you. Just don't tell him it's an Amiga beforehand.

3 First check that you have the latest drivers for the Surf Squirrel. Secondly, are you really, really sure you have everything terminated properly? Try swapping the order of the CD-ROM drive and hard drive, and try a new cable, keeping the length to the minimum possible.

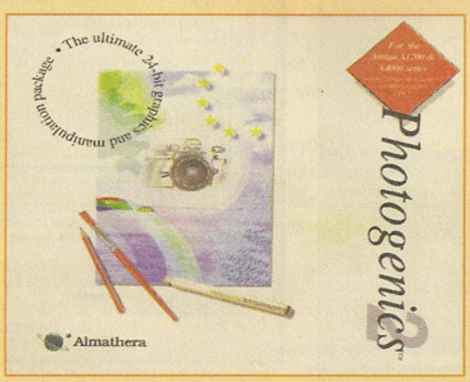


Photo imaging on the Amiga with *Photogenics 2a*.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved).



John Kennedy.

Also:

- **Be concise.**
- **Do your best to detail the problem.**
- **Describe the events that caused it.**
- **Give full details of your equipment.**
- **Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.**

Fill in, photocopy or copy the form below as best you can. Unfortunately we cannot reply personally.

You can email your queries to amformat@futurenet.co.uk, putting "Workbench" in the subject line.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... **Mb**

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

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Dave Cusick explains the pros and cons of making use of web caches.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk or via my website at http://www.dcus.demon.co.uk/.

The Internet is clogged up. As more and more people come online around the world, the infrastructure upon which the network depends is becoming increasingly stretched. It's not a new problem; things have been getting progressively worse since the web started to become popular around 1994.

> Attempting to apply the law of copyright to proxy caches is about as appropriate as using a carrot to mow your lawn.

The web has contributed in a huge way to the strain on the Internet. That's because every time you request a web page, a series of requests has to made to the server on which it resides. Data then has to be passed from that server through a series of routers around the world to your Internet Service Provider, and thence on to you.

Internet Proxy Caches can help to reduce the strain on the network. They work on the same principle as local caches. Typically, every web browser uses its own local cache, which is simply an area on your hard drive where pages you've requested in the past are stored. The next time you ask to see those pages, they can be loaded from your hard drive rather than having to be requested from a remote site.

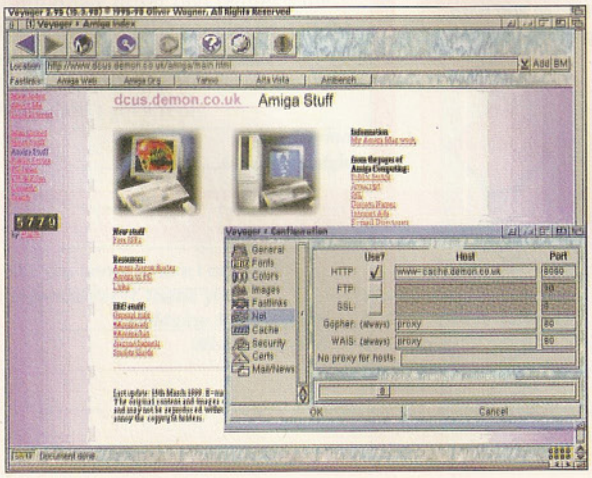
Proxy caches work in the same way except that they're located at remote sites and serve multiple users. When your browser is configured correctly, every time you request a site the program will see if there's a copy stored in the proxy cache. You might have requested this copy yourself in the past, or another user of the cache might have requested it. If there's a copy there, your browser will display that copy and a request will never actually be sent to the remote site from which the page actually originates.

Caching obviously has a beneficial effect in reducing network load, but it also offers fast access to pages; because the request is travelling directly to the proxy cache, if that proxy is located relatively close to you – for instance, if it's maintained by your ISP – then there's a single hop between you and the source of the pages you're viewing.

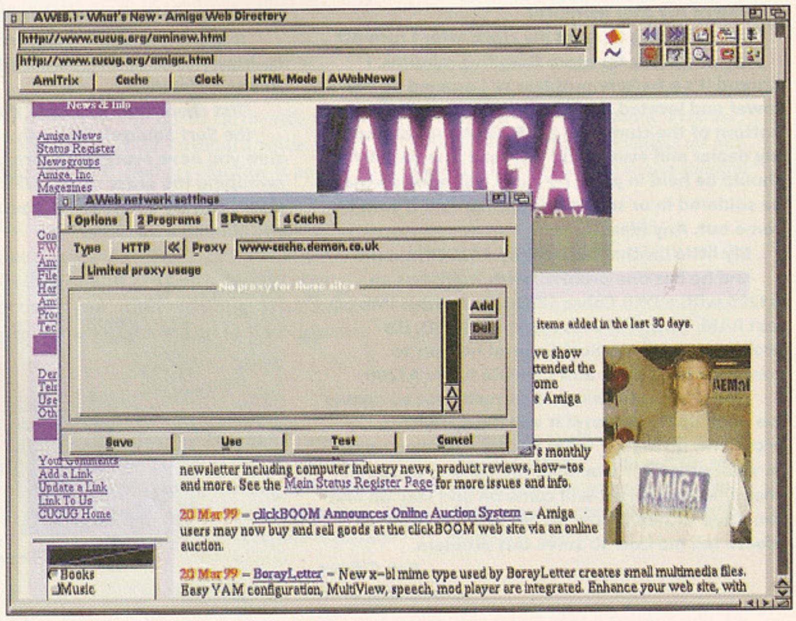
Many ISPs provide their customers with a proxy server address which they can enter into their browsers. If you're not already using one, it could well be worth contacting your ISP, finding out the address details and entering them into the appropriate requestor within your browser's settings screen.

This being the real world, of course, there are bad sides to caching. Firstly, because a cache holds a copy of the remote site you're accessing, it may not provide the most up-to-date version of the pages on that remote site. Fortunately, most browsers let you check for more up-to-date versions of pages before accessing the cache; the options are generally located in a window called Network Settings, or something similar.

Secondly, the European Union has recently begun debating whether caches infringe copyright laws. Because copyright exists in web pages just as it does in any other form of document, broadcast or whatever, it's been suggested that caching pages on proxy servers is in fact illegal.



In *Voyager*, the proxy settings are located on the net page of the General Settings screen.



In *AWeb*, the proxy cache settings page is to be found under Network Settings

Suffice to say that if it were to be deemed illegal and proxy caches were to be forbidden, the web would grind almost to a complete halt, such would be the strain on its already overburdened paths. Not only that, but the law would also by extension make local caches illegal, so you couldn't even store pages on your hard drive temporarily. Essentially, attempting to apply the law of copyright to proxy caches is about as appropriate as using a carrot to mow your back lawn.

Thirdly, caches cause practical problems for webmasters. Let's imagine for a moment that you've created a wonderful website which you want the whole world to see, and you've set up an elaborate counter on your index page so you know exactly how many people are visiting it. Well, the chances are that your precious counter won't produce especially accurate results because the counter image will be cached by proxy servers around the world, and people who are accessing your site via those proxy caches won't show up on your counter at all.

Similarly, users who view your site through a proxy server won't necessarily be getting the latest, most up-to-date version of it – they'll be getting the site stored on the cache. While many computer users would know how to ensure they were getting the latest version despite coming through the proxy cache, there's a fair chance that a lot of newcomers wouldn't, and they would remain in blissful ignorance of the fact that they weren't seeing the latest version of the site.

There's even a danger that people could come across a cached version of your site when using a search engine, and proceed to the cached version without ever coming across your actual site. Fortunately, this is exceedingly unlikely because web crawlers don't usually index caches.

As a Webmaster, it's therefore worth thinking about the implications of web caches and making use of the HTML elements which are designed to allow you to control how caches treat your pages. In theory, the easiest way of instructing caches not to store copies of your pages is to include the appropriate <META> tag in the header of your pages, like this:

```
<META HTTP-EQUIV="Pragma" CONTENT="no-cache">
```

Alternatively, you can specify a date after which a cache should not store the page:

```
<META HTTP-EQUIV="expires" CONTENT="Sun, 21 Mar 1999
20:00:00 GMT">
```

Most browsers follow this rule, although, notably, Microsoft's *Internet Explorer* browsers don't, and according to recent statistics, upwards of 50% of web users may now be using various versions of this program. Even worse, many proxy caches don't take any notice of META tags at all.

The only way to instruct these caches not to store copies of your site's pages is by locating the pages on a server which sends certain elements of the HTTP 1.0 and 1.1 protocols. To do that though, you need to be running your own web server, which, of course, most of us are not.

Another way to try to reduce the effects of caching is to ensure new content within your site is placed on pages with new names – in other words, create a new URL for every new page you produce. It might sound obvious, but if you keep the number of pages which you regularly have to update to a minimum, the problems associated with caching your site are minimised accordingly.

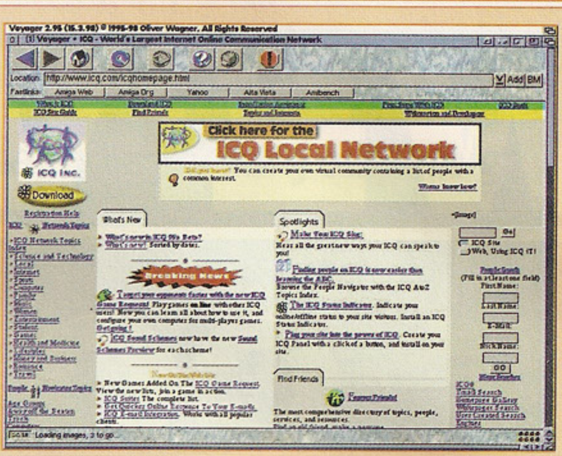
Unfortunately though, the bottom line is that although caches are extremely useful things, while they exist there is no way of knowing for sure whether visitors to your website are seeing things exactly as they should be doing. AF

ICQ UPDATE

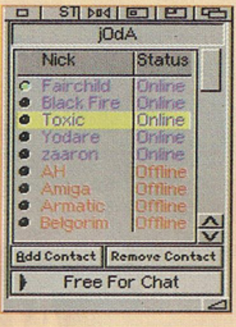
Although there are now a number of extremely impressive Amiga *ICQ* ports out there, Brian Gilbert, the chap who originally contacted Mirabilis in an attempt to organise an official conversion, is still beavering away on his own *AmigaICQ*.

Brian has created all the graphics for the project within the capabilities of the somewhat outdated *MUIBuilder* and has constructed an extensive mock-up of how the GUI should work. He's now looking for somebody to replace some of the classes, such as string and listviews, with some of the better alternatives which have become available since *MUIBuilder* development ceased, and for any help with the interfacing of the *ICQ* protocol handling library. Fairly advanced *MUI* experience is probably essential.

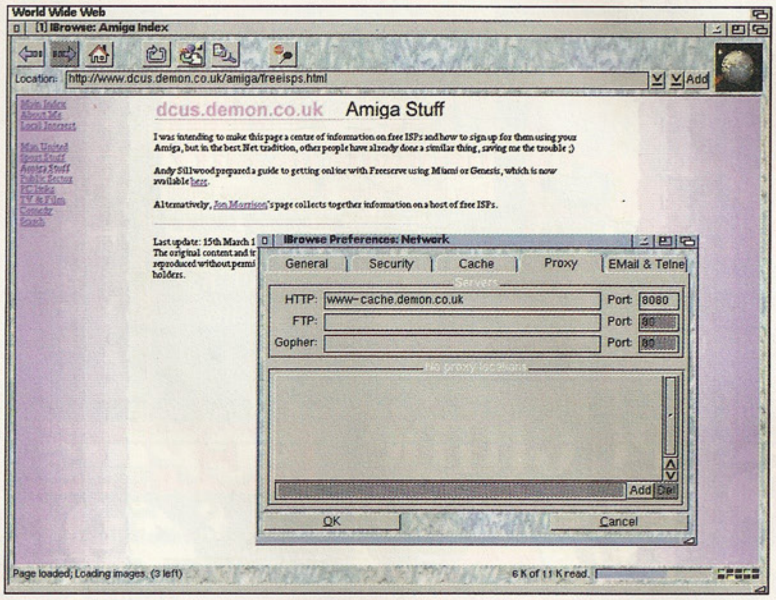
If you reckon you can help, Brian can be contacted via his *ICQ* UINs, 6880132 and 421330, or via email on brian@mcmedia.com.au.



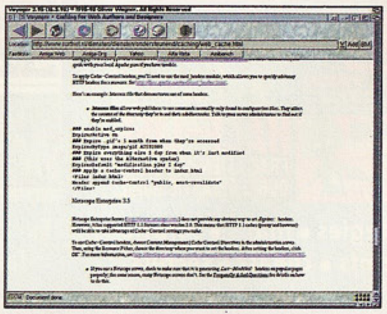
With Mirabilis now being owned by AOL, *ICQ* is becoming more common than ever across the computing world.



StrICQ is probably the best Amiga *ICQ* client currently available.



Again, it's the Network Settings window which contains the proxy settings in *iBrowse*.



Caching for Web Authors may not be much to look at, but it makes interesting reading.

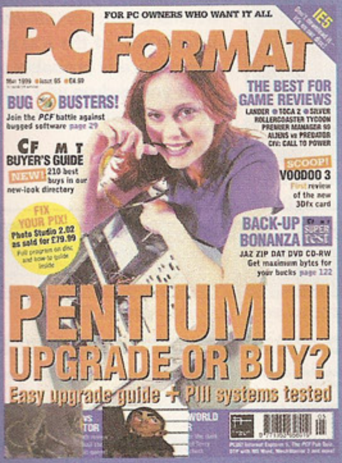
USEFUL URLS

Caching for Web Authors: http://www.surfnet.nl/diensten/diensten/ondersteunend/caching/web_cache.html
Cache Now! http://www.vancouver-webpages.com/CacheNow/

If you've got a PC as well, WE'VE GOT IT COVERED!



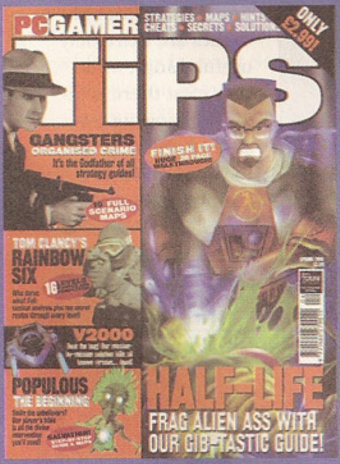
The essential guide for anyone who wants to make the most of their PC.



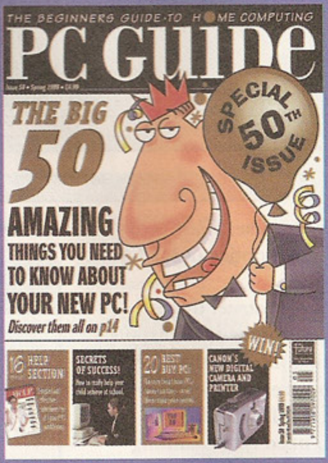
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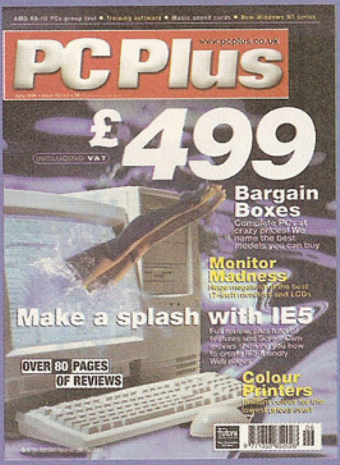
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CREATIVE

The indispensable guide to getting the most out of your Amiga

By the time that you lot will be reading this, it will be almost summer. You'll be thinking of spending time in the garden or at the beach, but just because there's a bit more ultra-violet radiation kicking about the atmosphere, it doesn't mean that you should ignore your Amiga. To make sure that you don't, we have three more fact-packed tutorials to get those creative juices flowing.

Nick is getting closer to making ARexx useful, this month showing you how to loop-the-loop in your scripts, Simon carries on banging the metal with a look at CIAs (which has nothing to do with shady intelligence agencies, but everything to do with with timer chips in your Amiga), and, in the penultimate part of his HTML tutorial, Neil guides you through imagemaps, a fairly simple way to liven up navigation of your website.



Richard Drummond

SEND IT IN!

WE NEED YOUR INPUT.

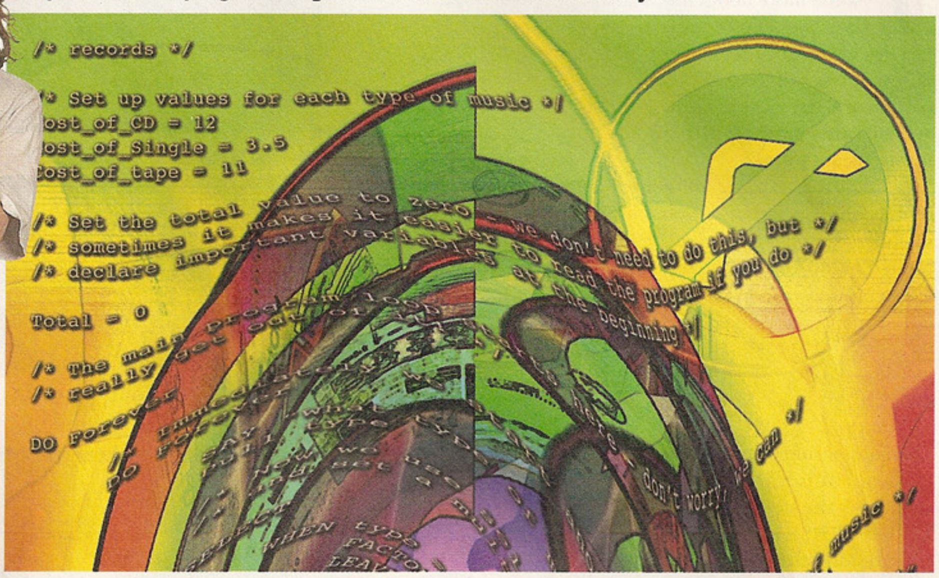
Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

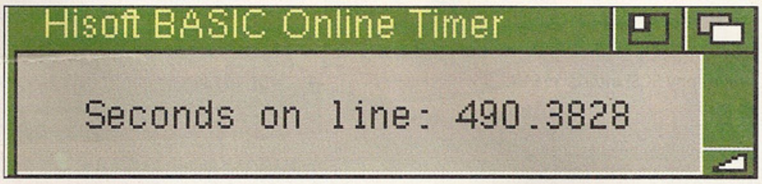
PROGRAMMING
Is there a language you can't get to grips with? Or maybe you want to know how to do a specific thing in C or ARexx? You might never find the answer unless you write in and tell us about it!

UNDER THE BONNET
Unsure of how how your Amiga really works. Not sure if you are getting the best from your hardware? Write to us.

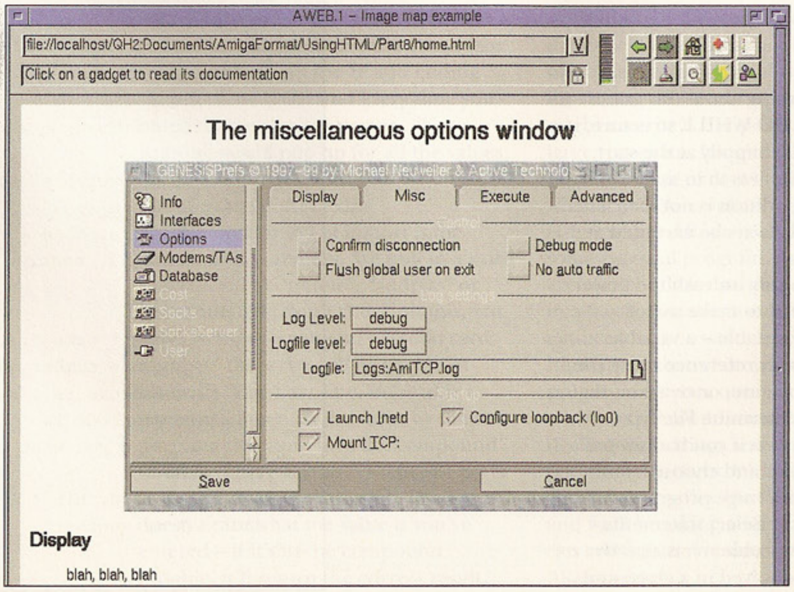
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Is there something you desperately want to be able to draw? Drop us a line! Contact us at:

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putting "Creative" in the subject line.





Banging the Amiga's hardware to find out how long you've been online.



Imagemaps enable you to make this screen grab act just like the real thing.

Useful ARexx

In the third tutorial in this series, **Nick Veitch** explains how going loopy can be useful.

This month we're going to talk some more about loops and how they can be used. In actual fact, we've already used a lot of different types of loop already, particularly last month, although there are still three more types we should take into consideration.

The first is a slightly different style of the common indexed loop, but it includes a step. For example, if you wanted to loop down, decrementing by a step of two, you would use:

```
Do loop = 10 TO 2 BY -2
   Say loop
END
```

This loop would output 10, 8, 6, 4, 2 and stop. BY is an extra keyword, used to identify the step amount.

DO WHILE is a useful loop structure which keeps the loop going as long as a particular condition is met. For example:

```
DO WHILE name = "Nick"
   SAY " Do you want a Guinness"
END
```

What makes this loop different is that it will only be executed at all if the condition is met before the loop starts. In this example there will be no output at all if name doesn't contain "Nick" when ARexx gets to the Do statement. The final type is the DO UNTIL:

```
DO UNTIL z < x
   z = z - x
END
```

The important thing about this one is that, unlike the DO WHILE structure, it will execute quite happily at the start, even if z is already less than x, and therefore the condition is not met. This type of loop will always be executed at least once.

In order to truly unleash the power of a loop, we need to make use of another type of variable – a variable which we can easily reference using the loop counter. Imagine, once again, that we're trying to determine FileTypes. What would happen if you had several dozen to check for and choose from? You'd end up with huge programs full of If statements or Select statements. Fortunately, this problem has already been solved, and solved in a classy and spectacular way in true ARexx fashion. Now read on…

> Arrays are very good for storing large quantities of similar information, rather like a database.

ARRAYS

ARexx can handle the complex variable type known as an array. This is simply a variable which has a name and an index number. Think of it like a library. The array variable name is the name of a book, and the index number is the page number. Each page contains different information, but all the information is easy to access as long as you know the name of the book and the page number. Arrays are very good for storing large quantities of similar information, rather like a database.

ARexx calls its arrays "compound variables", and they're even more

Contents

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

Listing 1

A SIMPLE DATABASE PROGRAM FOR RETRIEVING DATA

```
record. = "Not Known"
record.ben.phone = "01225 442244"
record.ben.address = "30 Monmouth Street"
record.ben.postcode = "BA1 2BW"
record.mark.phone = "01225 123456"
record.mark.address = "12  Slowly Walk"
record.mark.postcode = "ZZZ 40K"
record.colin.phone = "01225 222345"
record.colin.address = " 3 The Gutter"
record.colin.Postcode = "S022 LED"
DO forever
   SAY" I know everyone, go on, ask me about someone"
   PULL name
   IF record.name.phone = "Not Known" THEN DO
        SAY "Well, nearly..."
        LEAVE
   END
   SAY "Oh, old " name "..."
   SAY "His phone number is " record.name.phone
   SAY "His address is " record.name.address
   SAY "His Postcode is " record.name.postcode
   SAY "What did you want to know? (phone/postcode/address)"
   Pull what
   SAY "As I said, his " what " is " record.name.what
   SAY "Ask me another"
END
```

powerful than the array structures you'll find in traditional languages like *BASIC*, but easier to use than the complex pointer structures as found in *C*.

As we said, the variable is made up of two parts: a name, or stem, and an index, which are separated by a full stop. For example:

```
name.1 = Colin
name.2 = Mark
name.3 = Ben
```

are all valid statements in ARexx, and all relate to different variables.

The power of this lies in ARexx's ability to evaluate and parse variable names so that, for example, when x is equal to 3, name.x is the same as name.3

SHORT ARRAY EXAMPLE

```
name.1 = 'Ben'
name.2 = 'Colin'
name.3 = 'Mark'
Do loop = 1 to 3
   Say "name " loop " is "
name.loop
END
```

Okay, I guess you get the general idea of the way ARexx handles simple arrays, but that really isn't the half of it. You can have multi-dimensional arrays just by adding a further component to the compound variable, so there's no reason why you can't have:

```
name.1.1 = ben
```

This is really useful for handling all sorts of data. Think of a three dimensional graph, for example. You could store the z values in a two dimensional array, value.x.y, and using some nested loops you'd easily be able to extract the z value for each x and y co-ordinate for a graph or whatever.

Just to make ARexx's compound variables even better, you don't even have to use numbers. For example:

```
record.mark.phone = ' 01225 717834'
record.mark.name = 'Mark Wheatley'
```

is perfectly valid, even if 'Mark' and 'phone' are not in themselves variables representing numbers. This is what we're using for our example program this month – a database.

This listing is fairly straightforward in terms of structure, but there are a few special bits and pieces you should pay particular attention to. The first is the very first line (not counting the comment). This line sets up the whole compound variable beginning "record." as having the value "Not Known". This simply means that if you try to get the value of any compound variable beginning "record." which hasn't been defined, it will return that value.

It isn't necessary to do this, but it can be useful because you may want to return some statement if a record isn't there. You could remove the check (the bit beginning with the IF and ending with the first END) and every time you entered an unknown person, "Not Known" would pop up for all the values; the ARexx program wouldn't even care that the data didn't exist.

The next thing of import is the second Pull statement. We pull in a word which is either "phone", "address" or "postcode" (we don't check on this, but as we've seen, if you enter "credit card number" the script will just say "Not Known"). The next line, we're able to immediately return the value by simply plugging the input into the compound variable. There are no IFs and SELECTs as you might have expected. The script doesn't care what the value is you've entered – if it's in the compound variable, it'll return the correct result.



Although the classic example of a database is an address book, as we've illustrated here, it can obviously be used for storing all sorts of useful stuff. It might even be a component of a much larger program. Imagine, for example, a huge database of convolution matrices which could be applied to graphics data, either within ARexx itself or through some external program. Array structures are very handy for storing complex data in a way that makes it easy for you to extract what you want, when you want it. Remember that when you come to write programs on your own.

In next month's issue we'll be dealing with strings and the functions pertaining to them. We'll also find out about the very flexible Parse command and we'll be taking a look at how you can add argument support to your ARexx scripts.

Banging the Metal

Simon Goodwin reveals 8520 Complex Interface Adaptor PEEKs and POKEs.

AFCD40:-In_the_mag-/Banging_The_Metal



Contents

This part of our advanced tutorial series addresses the Custom Interface Adaptor 8520 'CIA' chips in more ways than one. It shows you how to read counters and flash lights, as well as how to test and set serial and parallel port signals, directly from *BASIC* and from Shell scripts.

Two CIAs provide timing pulses and general purpose control lines used throughout the Amiga system. They culminate generations of interfaces, from the original PIA 'Parallel Interface Adaptors' via 'Versatile' VIAs found in earlier Commodore computers like the VIC20 and C64.

Amiga CIAs are dwarfed in complexity by the DMA custom chips – Paula, Agnes and Denise on 16-bit Amigas, or Paula, Alice and Lisa on 32-bit AGA systems – but they're still neat, and quite essential to the Amiga, as owners of the Draco would-be Amiga-clone will attest. Much Amiga software thrives on Draco's retargetable audio and video, but falls over unless authentic CIAs are added to the MacroSystems board.

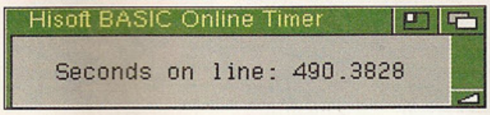
CIAs are vital to communication between the Amiga and the outside world, implementing the keyboard and parallel ports, joystick buttons, disk and serial port control lines, audio filters and the power light. They also keep track of time, in various measures; from a few dozen display fields per second, through hundreds of scan lines per field to the hundreds of thousands of 'E clocks' pulses every second.

The CIAs are relatively easy to program because they're passive devices. They don't do anything except tick quietly to themselves, unless explicitly programmed. They're unexciting compared with the DMA chips, which continuously communicate with one another and main memory, but still do lots of useful work.

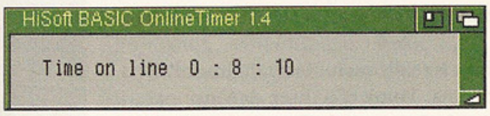
The diagram shows how the CIAs contribute to the Amiga system. CIAA manages disk and joystick fire inputs, parallel port data lines and the keyboard link. CIAB adds outputs to control four floppy drives and handshaking lines for the serial and parallel ports. These signals are also available on Zorro internal 'video' connectors where they serve double-duty, controlling Video Toaster and genlock features. The table lists bit assignments by port address.

SERIAL EXAMPLE

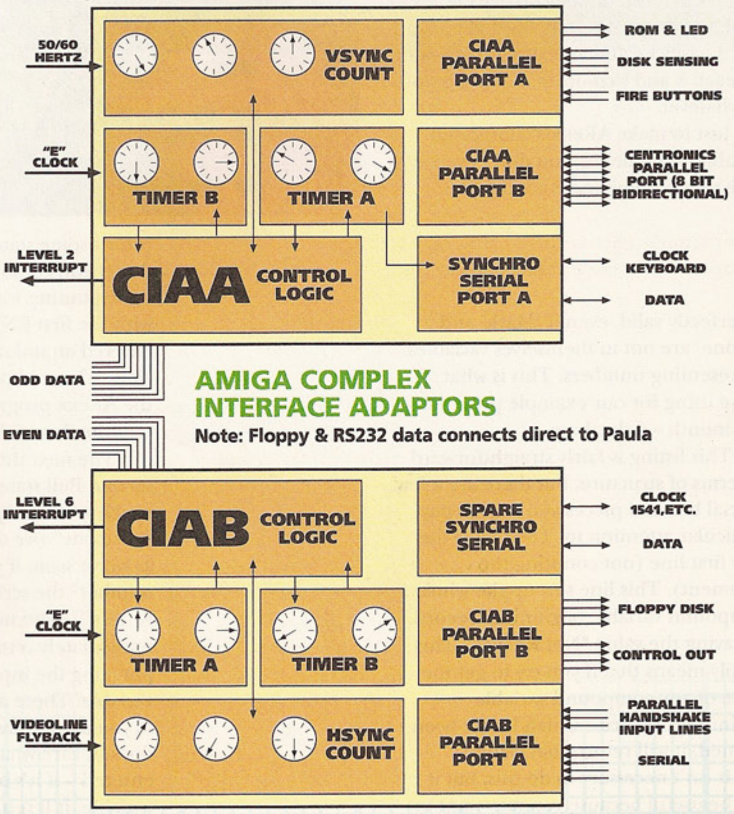
The HiSoft *BASIC* listing shows a simple way to record time spent online, for



The simple Online Timer in action.



The friendlier Online Timer from the *AFCD*.



Internal organisation of the Amiga CIAs.

Flashing Light Digital Output

```
; AF Shell Script Parallel port output hack!
; Call should open PAR: to allocate hardware

echo "Press Control D to stop blinking loop"
poke   ciaa 768 %11111111 ; Parallel outputs

lab LOOP
   poke ciaa 256 %00000000 ; All outputs off
   wait 1
   poke ciaa 256 %10000000 ; Turn pin 9 high
   wait 1
skip LOOP back
```

CIA PORT BIT ASSIGNMENTS

BYTE	BIT	DIRECTION	PURPOSE
BFD000	0	In	Parallel printer busy
BFD000	1	In	Printer out of paper
BFD000	2	In	Printer SEL (online)
BFD000	3	In	Serial Data Set Ready
BFD000	4	In	Serial Clear To Send
BFD000	5	In	Serial Carrier Detect
BFD000	6	In	Serial Request To Send
BFD000	7	In	Serial 'Terminal Ready'
BFD100	0	Out	Pulse steps floppy head
BFD100	1	Out	Floppy stepping direction
BFD100	2	Out	Select floppy disk side
BFD100	3	Out	Select floppy drive 0
BFD100	4	Out	Select floppy drive 1
BFD100	5	Out	Select floppy drive 2
BFD100	6	Out	Select floppy drive 3
BFD100	7	Out	Turns on drive motor(s)
BFE001	0	Out	Put ROM in low memory
BFE001	1	Out	Power LED/Audio Filter
BFE001	2	In	Floppy disk changed
BFE001	3	In	Floppy disk protected
BFE001	4	In	Floppy disk at track 0
BFE001	5	In	Floppy drive is ready
BFE001	6	In	Joystick 0 fire on pin 6
BFE001	7	In	Joystick 1 fire on pin 6
BFE101	In	Out	Eight-bit parallel data

communication software like *TERM*, as well as TCP/IP stacks. It works by reading the standard serial port hardware. Similar hacks are also possible for other interfaces, given their port addresses. Signals are generally 'active low' so a 0 level on bit 5 of CIAB port A indicates modem carrier detection, for instance. In *Assembler* you'd write:

```
btst #5,$BFD000
bne  NoCarrier
```

The *BASIC* equivalent is:

```
IF PEEK(12570624) AND 32 THEN PRINT "No Carrier"
```

When programming the serial or parallel port, utilities like *MapDevice* may divert calls for SER: or PRT: to alternative hardware. Opening the standard name doesn't necessarily allocate the default hardware. Check this with another PEEK:

```
PEEK DEV=serial long 10 string
```

This returns the name of the real device selected when you open the device named after DEV= above, such as "pit.device".for Multiface parallel redirection or "duart.device" for GVP serial ports.

Serial Port Online Timer

```
REM Metal-bashing AF Online Timer by SNG
REM $INCLUDE dos.bh
LIBRARY OPEN "dos.library" ' For Delay
WINDOW 1," Hisoft BASIC Online Timer", _
   (200,16)-(240,56),1+2+4+16+256
CIAA_PRA&=12570624
Timing%=0 : LOCATE 2,4
PRINT "Seconds on line: 0";

REPEAT check
   CD%=(PEEK(CIAA_PRA&) AND 32)
   IF CD%
        Timing%=1 : Start!=TIMER
      ELSE
        IF Timing%
           LOCATE 2,20
           PRINT TIMER-Start!;"      ";
        END IF
      END IF
   Delay &30 ' Update periodically
END REPEAT check
```

PARALLEL EXAMPLE

The binary value in register $BFE301 configures parallel port bits as inputs or outputs. This gives you eight general-purpose control lines, ideal for hardware hacking. Take care to avoid short-circuiting any output, especially on AGA Amigas with unsocketed CIAs. To prevent other programs or the system interfering while you're poking, open PAR: or parallel.device unit 0. Always allocate resources before use; then you can bang the metal without disrupting the rest of the Amiga system.

The Shell script illustrates parallel digital output. POKE CIAA 768 %11111111 selects eight outputs. Substitute 0s for 1s to make some bits TTL-compatible inputs, suitable for UPS or alarm sensing, Brailer switches or other homebrewed hardware. To run the script, click on the CD icon or type:

```
EXECUTE BLINKER <PAR:
```

The redirection <PAR: ensures that the parallel port is allocated while the script runs, so the system leaves it alone.

The program flashes an LED connected between pin 9 (parallel port most significant data bit) and ground (on pins 17 to 25). Less significant bits use pins 2 to 8.

WAITs determine the flash period. Connect the light in series with a resistor of 470 to 2200 ohms to limit the current. Swap the LED pins if it doesn't shine. LEDs only work one way round. Keep connections short, and don't use torch bulbs as they drain too much power.

CIA SERIAL

Each CIA implements a serial port – not the RS232 kind, with it's free-running asynchronous data and miscellaneous handshaking lines for flow control, but 'synchronous serial' where each data bit is accompanied by a pulse on a serial clock line. Unlike RS232, sent and sampled at a prearranged rate, the transfer speeds of these ports depend on the rate of synchronising clock pulses. They stop and start arbitrarily as bits of data become available.

CIAA handles the keyboard interface. 'Raw key' events are detected by a separate microprocessor connected to the keyboard, converted to codes corresponding to the key position. Raw key codes take no account of the marking on the key-top but are useful in emulators when the key's placement and effect is more important than its legend.

Keymaps convert raw codes into ANSI characters. UK Kickstart 1 Amigas have SETMAP GB in their startup to configure Shift 3 as a pound sterling rather than a US hash symbol. Modern Amigas do this by referring to the DEVS:Keymaps drawer.

There's another serial port in CIAB. This isn't used by the Amiga system, but it's ideal for communication with old Commodore and Atari peripherals which expect a synchronous serial interface. See the FS1541 and Easy1541 drivers or vintage Commodore emulators for examples of programming this port.

CIA TIMERS

Each CIA chip contains a 24-bit counter and two 16-bit timers. The timers are clocked at one tenth of the original Amiga clock rate, around 700KHz. The exact value depends on the video standard, PAL or NTSC, and can be checked with:

```
PEEK LONG library exec 568
```

The timers count down from the 16-bit value loaded into their registers. Timer A low is the fifth byte register, with the high byte (count*256) in the sixth register. The counts for Timer B are in the next two registers, in the same order. When they reach zero they can generate an interrupt and optionally start counting down again.

A VERSUS B

All four timers run at the same rate, shared by the system software or allocated by timer.resource's AddICRVector. Timer A in CIAA synchronises keyboard interfacing. CIAA (odd) counts Vertical Sync pulses and can generate level 2 interrupts. Peek LIB exec 530 returns the Vertical field rate, typically 50 for PAL and 60 for NTSC.

CIAB (even) counts horizontal lines (Hsync pulses) and generates correspondingly faster level 6 interrupts. CIAB can reprogram the system at a specific scan line; your programs can read it to check the current line.

PEEK CIAB 2048 gives the scan line number, inevitably outdated by the time scripts have read it. PEEK CIAB 2304 reads the next byte (scans times 256), invariably zero in 200-line NTSC mode, rising to 1 or 2 in DBLscan modes.

NEXT BITS

Part 1 briefly tabulated CIA counter, timer and port addresses. For details of the CIAs and their connections, consult Chapter 8 and Appendix F of Addison-Wesley's *Amiga Hardware Reference Manual.* Next month we bang Paula's metal with elegant *SuperBASIC* to generate polyphonic stereo sound and harmonies unmatched by MIDI.

Using HTML

Neil Bothwick points out that imagemaps can be really useful.

AFCD40:-In_the_mag-/Using_HTML

ON THIS MONTH'S CD

Contents

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

A link is a link and each time you click on it you go to the same page, right? Not so! A text link may jump to the same place each time, but an image may link to a different address depending on where on that image you click.

An imagemap is a clickable image, but unlike the standard construct of an <IMG> tag within an <A> tag, this one will jump to a different URL according to the specific point on which the user clicks. There are many ways to use this; for example, you could use a single imagemap across the top of a page as a menu bar, instead of using separate buttons in a table. A company could display a map of the area they cover, with each part of the map linking to the page of the branch covering that area.

> An image map is a clickable image, but it will jump to a different URL according to where on the image is clicked.

TYPES OF IMAGEMAP

There are two ways to implement an imagemap: server side imagemaps and client side imagemaps. Server side imagemaps are the original way of doing it. The image is contained within a normal <A HREF=></A> tag where the URL is that of a map file on the server. Clicking on the image sends the name of the file and the co-ordinates selected to the server. A script then reads the map file, calculates the URL for those co-ordinates and returns that document to the browser.

This is useful if your map needs to link to a CGI script anyway, such as a database, but otherwise it involves unnecessary access to the server and makes it impossible to test your page offline, unless you have a web server and CGI installed on your Amiga.

Client side imagemaps avoid these restrictions. All of the information needed is contained in the HTML itself and the browser determines the URL for any particular point on the map. This makes offline page development easy and also means that the user gets better feedback. With a server side map, the status bar displays something like http://www.server.com/cgi-bin/imagemap?mapfile.map.x=27.y=33, which doesn't help the user. A client side map will show the actual URL that will be linked to by that point on the image.

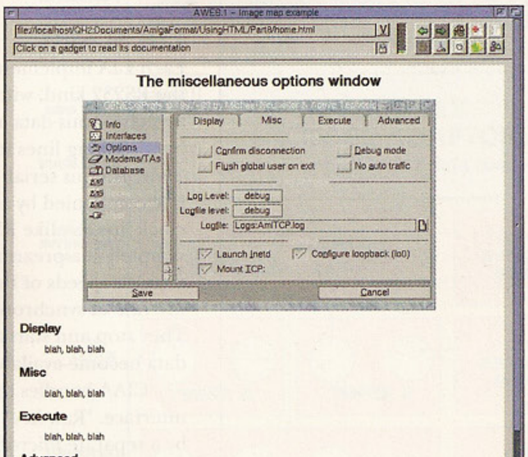
A client side imagemap has two separate elements: the image and the map data. Here's a bare bones example:

```
<MAP NAME="mymap">
<AREA SHAPE="RECT" COORDS="0,0,100,50" HREF="top.html" ALT="top">
<AREA SHAPE="RECT" COORDS="0,51,100,100" HREF="bottom.html" ALT="bottom">
</MAP>

<IMG SRC="mymap.gif" WIDTH="100" HEIGHT="100" ALT="Image map" USEMAP="#mymap">
```

This displays an image that takes you to one document if you click in the top half and another for the bottom half. Normally you would have the map data in the same document as the map. However, if you want to use the same data on several pages, you can put it on the home page. This page should already be in the user's cache when they select an imagemap on another page so there's no network access needed. It's a good idea to put the data before the image – if you put the image first and the page is slow in loading, the user could click on the map before the map data has been loaded.

<IMG> has an extra attribute, USEMAP. This tells the browser that this is a client side imagemap and to use the map data named "mymap" in the



Our example documentation. Note the help text in the browser's status bar.

CREATING IMAGEMAPS

Clearly you don't want to be counting the individual pixels of an image to create the image map data. Fortunately there are several options to generate the <MAP> data with only a few mouse clicks. The CD contains ARexx scripts for *ImageFX* and *PPaint 7* (given away on *AFCD26*) that generate the map data by "drawing" the areas on the image (I used *ImageFX* for the example here). There are also a couple of independent image map creators available on Aminet.

current document (remember, starting a URL with # links to a named item on the current page). The <MAP> tag only takes one attribute, its NAME.

Within the <MAP> tag we have a number of AREA tags to define each clickable area. Each AREA tag takes these attributes:

SHAPE: Can be one of RECT, CIRC, POLY, DEFAULT. The first three define the area as a rectangle, circle or polygon. DEFAULT applies to all parts of the image not specified in another AREA tag. You would normally use this for the last one.

COORDS: The co-ordinates of the area. This varies according to the SHAPE used. For a rectangle, the co-ordinates are x1, y1, x2, y2. The first pair are the co-ordinates of the top left, the other refers to the bottom right corner.

A circle has three co-ordinates, x, y, r, referring to the x, y co-ordinates of the centre of the circle and its radius. A polygon uses x1, y1, x2, y2, x3, y3 and so on to specify each corner.

> "People may be visiting your site via a slow link so remember to keep imagemaps as small as possible..."

HREF: The URL to load when this area is clicked. If you want an area to jump nowhere, use NOHREF. This is normally used for the default, or could be used to stop a part of the image accepting the default action.

ALT: Some browsers will display this text when the image isn't loaded. People may be visiting your site via a slow link so remember to keep imagemaps as small as possible and provide text alternatives wherever you can.

TARGET: The frame or window in which to load the new URL. If you're using an imagemap in a menu bar you'd use this to load the document into the main window.

Apart from TARGET, all of these attributes are compulsory in the latest HTML specification.

JAVASCRIPT

There isn't enough space for a detailed coverage of JavaScript here, just enough to explain the usage in this example. HTML supports "events" for objects. Two of the events for a link are onMouseOver and onMouseOut, the first occurring when you move the mouse pointer over the object and the second when you move the mouse away again. We use the same JavaScript command for both; window.status='text' sets the contents of the status bar, where you would normally see the URL of the link, to "text". To clear the status line when the mouse moves off the link, onMouseOut sets window.status to an empty string.

A MORE USEFUL EXAMPLE

Let's look at a real world application of imagemaps that also illustrates another use for HTML. In addition to online web pages, HTML is good for program documentation with its inline images and hypertext links. Here we see how a client side imagemap can make documentation even easier to use. The image is included in the normal way, with the addition of an ISMAP attribute; the MAP tag contains all the real work. The full version is on the CD, but the edited highlights are shown below.

```
<MAP NAME="optionsmisc.map">
```

First we give it a name.

```
<AREA SHAPE="RECT" COORDS="150,21,249,42" HREF="#display"
ALT="Display" onMouseOver="window.status='Display options';return
true" onMouseOut="window.status='';return true">
```

A standard rectangular shape, covering the "Display" tab of the image links to a part of the current page and also provides "help" text using JavaScript (see boxout).

```
<AREA SHAPE="RECT" COORDS="177,68,371,93" HREF="#confirmdisconnect"
ALT="Confirm" onMouseOver="window.status='Ask for confirmation before
disconnecting';return true" onMouseOut="window.status='';return true">
```

As for the tabs at the top of the window, each of the gadgets has an area defined to link to the relevant part of the documentation.

```
<AREA SHAPE="RECT" COORDS="154,59,551,128" HREF="#control"
ALT="Control" onMouseOver="window.status='Various control
options';return true" onMouseOut="window.status='';return true">
```

The browser reads the map data in the order it appears, stopping at the first match it finds. This means you may have a number of individual shapes and then a larger shape covering them all and the spaces in between. If you click on the smaller shape you get its link and if you click in a space you get the later link. This one covers the Control section of the window.

```
<AREA SHAPE="RECT" COORDS="7,300,183,318" HREF="" ALT="Save"
onMouseOver="window.status='Save the settings and exit';return true"
onMouseOut="window.status='';return true">
```

We have to cheat a little here. If you use NOHREF you can't use onMouseover (at least it doesn't work in *AWeb* or *Netscape*). By using an empty URL to achieve the same result of no action when clicking on the area, you can also display help text with onMouseOver.

```
<AREA SHAPE="RECT" COORDS="9,28,125,46" HREF="info.html" ALT=""
onMouseOver="window.status='blah';return true"
onMouseOut="window.status='';return true">
```

The items on the left of the display would be documented on different pages so these items are linked to a separate page. You can label a point in a page with <A NAME="info"> and jump to it with <A HREF="#info"> from the same page or <A HREF="prefs.html#info"> from another page.

```
<AREA SHAPE="RECT" COORDS="6,23,126,291" HREF="main" ALT=""
onMouseOver="window.status='blah';return true"
onMouseOut="window.status='';return true">
```

The whole of the left side list window is linked back to the main page. As before, this appears after the individual items in the window and so acts as a default for this section.

```
<AREA SHAPE="DEFAULT" HREF="" ALT="Default"
onMouseOver="window.status='Click on a gadget to read its
documentation';return true" onMouseOut="window.status='';return true">
```

Finally we have a DEFAULT shape. This is used whenever the user selects any area not defined elsewhere. In this case it doesn't link anywhere – default areas often don't – but it does display help information.

```
<IMG SRC="optionsmisc.gif" WIDTH="561" HEIGHT="338" ALT="Image map"
USEMAP="#optionsmisc.map" BORDER=0>
```

Now the map data has been set up, all that's left is to display the image using a normal <IMG> tag with the additional USEMAP attribute.



MailBag



Send your letters to: **Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW** or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SPARE US	SEND US
• Long letters with loads of points. • Complaints that *AFCDFind* and *AFCDView* don't work without any info as to why. • Your missives on why company X should port their latest PSX/PC title to the Amiga. • Letters asking for Richard's job. • Technical questions which should be addressed to Workbench.	What you want to see in OS3.5. • Whether you'll pay a deposit for one of phase 5's new accelerators. • Your ideas for the shape of the Amiga's future. • General questions you want answered (not technical ones – that's what Workbench is for!). •

THE PRICE IS RIGHT?

I'm sure that I'm not the only *AF* reader who wouldn't object to a price rise. The people who moan about the price going up should consider that if Future were to decide that *AF* was no longer profitable, it would fold.

I would personally much rather pay more than pay nothing. Besides since *CU* folded I (and all the other Amiga owners that I know) have had the £6 I used to spend on it burning a hole in my pocket anyway.

John Monks
via email

Well, we've certainly had a few floppy issue buyers complaining that the price rise for them has been quite steep (the floppy price is now the same as the CD at £5.99), but as we've explained, the floppy issue actually costs us more money to produce than the CD one does. As always, subscription is the answer. Even if you were still paying £4.50 for the floppy issue, the price of £29.95 for twelve issues is still a significant saving.

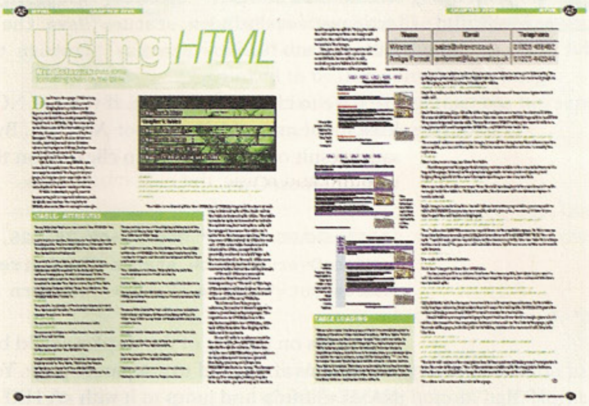
HTML PEDANT

I'm writing in relation to the HTML tutorial in *AF121* (March 1999) relating to tables. In that article, it was stated that: "<TR> and <TD> are somewhat unusual in that they don't need corresponding </TR> and </TD> tags. <TD> is assumed closed when the next <TD> or <TR> is found. <TR> is closed at the next <TR> or </TABLE>". I'd like to point out that this isn't strictly true. Under HTML 4 specifications, both the </TD> and </TR> tags are required. This may seem pedantic, but although Amiga browsers may display tables without the closing tags, *Netscape* browsers on other platforms are notoriously fussy about table layout and won't display tables if the closing tags aren't in place.

If you're designing web pages that you know will be used only by Amiga browsers, then by all means leave off the </TD> and </TR> tags, but if designing for the outside world, or if you want as large an audience as possible, then it's prudent to add the closing tags – if you don't, you'll lose a large potential audience.

Also, don't assume that just because you're designing a web page relating to the Amiga it'll only be read by Amiga browsers. Many people, including myself, get Internet access on PCs from work or university, so non-Amiga browsers may read your page.

Rajnish Bhaskar
via email


Using HTML

We make our tutorials as accurate as possible, but any corrections or extra tips for readers are always appreciated – thanks, Rajnish!



Check out Sabrina Online at http://www.coax.net/people/erics/

Alternative Title: "not a complaint, just an observation"

ROUND 'EM UP

As a regular or occasional feature for the magazine, I think round-up type reviews would be a worthwhile addition.

I would find the options for adding a graphics card to an A1200 useful too – as far as I can tell, these are Atéo bus, Pixel 64, phase 5 PPC, BVision, ZIII or Picasso/CyberVision64. Possible future options would be interesting, such as the BoXeR and what graphics card options that will have. Smaller round-ups on scandoublers/flicker fixers and IDE interfaces would make me subscribe right away!

Finally, a small gripe about the otherwise good cover CD: the *Napalm* demo complains about a lack of memory on my 10Mb A1200, and it would have been good to have had the hardware requirements printed in the magazine.

Dan Pidcock
via email

Round-ups are very nice to do, but also time-consuming and take up a lot of space in our office. Even so, we'll endeavour to do more of them. You're quite right about* Napalm's *requirements – we were under the impression that since the game's been talked about for quite some time, and the fact that it needs 16Mb RAM was quite well-known, we wouldn't need to repeat it. However, you're still right. Sorry!



***Napalm* needs a top spec machine to run at its best, as you probably already know.**

YOU GET NOWT FOR FREE

A word of warning about Freeserve. Like many, I signed up thanks to the articles in *Amiga Format*, and now run three websites from Freeserve.

However, about 80% of calls fail to connect, and I don't mean you get the engaged tone – if only you did.

The phone is answered, the modem whirrs away, but all in vain. Yet another 5p down the drain and more endless hours of frustration as I try desperately to update a page on one of the websites (and I'm talking about seriously off-peak times as well, so it can't be because of demand!).

Naturally I blamed my Amiga, *Miami*, *Voyager*, the phone line, everything, until I signed up with Free4All as well and found the joy of instant access every time.

The problem is, I'm stuck with Freeserve because of the amount of work I've put into setting up and publicising the websites. Regrettably, it seems Freeserve won't allow you to ftp into your webspace from other ISPs.

I'm not a happy bunny – it's not free if you waste hundreds of 5ps getting nowhere.

Jonathan Hayles Hayes

You're not the only one to write to us about Freeserve's poor service – we've had a number of complaints. I'd say you get what you pay for, but Free4all certainly seems to be very popular among Amiga users, perhaps because they offer specific Amiga technical support. Still, it's worth bearing in mind that Freeserve is several times bigger.

GAME TUTORIAL

Why don't you fatten *AF* up with a tutorial section, maybe one dedicated to trying to improve the Reader Games?

I mean, people can program, draw, make music, etc, but you haven't told them how to put this all together into a wonderful game. You keep saying that gameplay is the most important part of a computer game.

In this tutorial series, one month you might show us how to do an effective control system, the next month how to make good "interactive" sound and music, the next month how to reward the player.

It's no good working laboriously through 100 levels, just to have a boring screen with "Congratulations!" written on it. Just a thought.

David Thomsen
Wanganui, New Zealand

It's a good thought, and something we'll be addressing, but we can't fatten the mag that way. As I've said before, the only way to even keep the magazine as fat as it is is to make sure that there are enough advertisers advertising since there's a direct correlation between the number of adverts and the size of the magazine.

Snippets:

I seem to remember in a previous issue one of your readers wanted a program that could decode morse code into text. Well, I've written a program that is able to do this and, along with its source code, it's available from my website: http://members.xoom.com/Mr__Tickle/index.html (and yes, the two underscores are correct).

Peter Gordon
via email

I have a suggestion to make about your scoring system. Could you please go back to the old methods of scoring instead of those plus/minus points? You could replace the spots with stars to make it look a little more modern.

Danny Shephard
via email

I'd like to ask why you want stars instead of spots and why you want the old scoring system back since you give no reasons. We're even thinking of getting rid of scores entirely in the future, so write in and let us know what you think about that.

AFHTMLCD?

I was thinking that an HTML version of *AF* would be a great idea. Charge £5.99 and the all new *Amiga Format* CD-ROM Magazine will be the first CD mag from Future Publishing. You won't need *AF* in paper form any more and people would have to upgrade their computers in order to view the CD mag.

It would be much better than the paper form and with a great HTML design it would be the future – who wants piles of magazines, wasting trees and destroying the ozone layer?

Continued overleaf ➡



Check out Sabrina Online at http://www.coax.net/people/erics/

The computer was meant to be the paperless office, but we seem to be wasting more paper than ever! You could also have an online magazine, like *Future Gamer*, although that would be restricted solely to those with Internet access. I would be happy to pay for a version of *AF* on CD only. It would also save on printing, colour, duplication and packaging costs.

The future of all magazines should lie in the CD-ROM HTML format, and a demo version cut down on the Internet so people will know what they're buying and the paperless office will be here.

This is my vision of the future and I can't wait for it to be implemented – let's be the first to do it and watch everyone else copy us again.

Kevin Sapwell
West Croydon

Other Future mags have been on CD-only – SFX springs to mind for a start – but they've never proved too popular and I must say that the Amiga is probably one of the worst computers to do it for – how would you read it on the train, or under your desk at work?

It's okay for the PC or Mac because there are laptops versions of those machines that could be used at a pinch, but it wouldn't be ideal for our platform.

AMIGA LOGO TO GO?

Re: the Amiga logo. The Amiga tick is the Amiga and really demonstrates the AGA capabilities of the Amiga and should stay. But isn't the boing ball even older and didn't it cause a real stir in the computer world all those years ago?

However, you've answered your own question by showing the tick and ball on the April's Mailbag pages. It looks good and I think we should adopt that configuration as the official Amiga logo. It looks great – better than a half eaten apple or a wavy window.

So how about one of your clever people producing a nice animated .gif of the tick and rotating ball? If you do, why not put it on *AF*'s website for us lesser mortals to nick and use on our own websites? Size? The size in the mag looks about right. Go on, do it anyway.

Jim Buckley
via email

Remember that this is only the logo for the current Amiga range – the new Amiga will probably have a completely different one. As for the tick demonstrating AGA, I'm not so sure. The tick logo was used on the earliest Amiga materials and may even pre-date the boing ball.

NAPALM HELP

This is very urgent because it concerns *Napalm*. I got this by pre-ordering it, and it's amazing. However, I had to write a script to be executed instead of my startup-sequence if I ran *Napalm* because the included Napalm.Boot didn't work. Here is the script that I used:

```
run >NIL: No_Happy
C:SetPatch QUIET
c:newWPA8 QUIET
RUN <>NIL: C:copymemquicker QUIET
C:WFV >NIL:
RUN <>NIL: C:LowFrag
C:Version >NIL:
C:AddBuffers >NIL: DF0: 20
FailAt 21
c:makedir RAM:T RAM:Clipboards
makedir ram:env
assign env: ram:env
Resident >NIL: C:Assign PURE
Resident >NIL: C:Execute PURE
BindDrivers
C:Mount >NIL: DEVS:DOSDrivers/~(#?.info)
IF EXISTS DEVS:Monitors
  IF EXISTS DEVS:Monitors/VGAOnly
    DEVS:Monitors/VGAOnly
  EndIF
  C:List >NIL: DEVS:Monitors/~(#?.info|VGAOnly)
TO T:M LFORMAT
"DEVS:Monitors/%s"
  Execute T:M
  C:Delete >NIL: T:M
EndIF
Resident Execute REMOVE
Resident Assign REMOVE
system:wbstartup/noclick quiet
cd Games:napalm/
assign napalm: ""
assign napalm: cd0: add
assign exec: exec
assign missions: missions
assign fonts: fonts
assign libs: libs add
assign store: store
assign setup: setup
assign units: units
execute napalm
```

Hope this helps people. You made a serious mistake in your review as you said it couldn't work well on anything less then an '030/50 on Low Res, but I have an 18Mb A4000 with a PicassoIV (and Zip, CD, etc), and it only has an '030/25 and *Napalm* runs brilliantly on a High Res Picasso screen. I also tried it on a High Res screen (not Picasso), and okay, it was a little slow, but it ran really fast on Low Res. Saying that it won't work on lower than an '030/50 might stop people from buying *Napalm* and they'll miss out on a very good game. Might be worth mentioning this as well. Oh, last little bit – I've been reading your mag since it was *ST/Amiga Format*. I think I still have the 6th issue of that! Keep up the good work.

Chris
via email

I'm not sure saying that you should run in Low Res on an '030 was a serious mistake as most people won't have a graphics card to use it with, but I'm glad it runs okay on your machine.



CD WOES

Having recently invested in a CD-ROM drive, I now find difficulty in using it and find there are messages that I don't understand and references to software that mean little to me.

One of the best things you ever produced was *AF9, Format Special*, which was a guide to the mysteries of the Amiga – 'A1200 secrets revealed'. You might consider a similar issue now, or if that's not possible, maybe a series of articles on CD-ROMs, etc, – not technically what they do, but what you need to know to make use of them.

Many articles assume people understand what may be simple terms like 'patches' or references to 'PP', which some of us may find gobbledigook!

Ronald J. Wylie
Kirkcaldy

If you send a letter to Workbench that actually explains the problem you're having, we may be able to help you.

UNIDENTIFIED FILING OBJECT?

In reply to the letter 'Back To School' in *AF121* from Paul Wood, I'd like to thank all of the people who have attempted to get Amigas into the education system.

I'm the co-founder of a software project team called 'Amorphous', which is a member of a network of strategic alliances called UFOAD (United Federation of Amiga Developers). One of the current tasks of UFOAD is to introduce as many Amigas into the education system as possible. I can tell everybody in the Amiga community that Amorphous will be fully supporting UFOAD in this task. We aim to introduce a new character called Cosmo, and we hope to make Cosmo the educational mascot for the Amiga.

Our title will be used by a school in Liverpool (New Heys) to ensure that all activities are effective. It will come with 31 activities, along with a *Dizzy*-style cartoon adventure, database program, a demo which introduces the user to all of the characters and more. The game will be aimed towards all ages and we hope to have it priced at £14.99.

We also hope to persuade Amiga Inc. to launch new Amiga bundles. One of them will be a basic A1200 bundle, aimed at young children. Together with the help of the Amiga community, I'm sure that it'll be easy for the Amiga to capture the market of Vtech machines.

I'd just like to thank all those who have helped with Amorphous, including Trogladite Software, Maxwell Turpin, Hillary Lewis and Martin Sherwood.

More information about Amorphous can be found at http://www.trogsoft.freeserve.co.uk/amor.htm

Leon Brown
via email

WHY, YOU CAD!

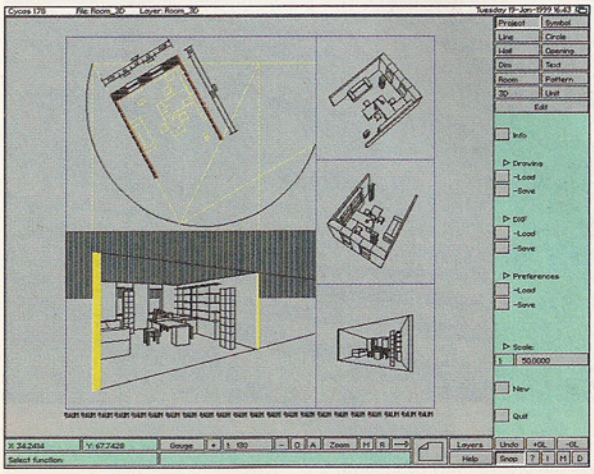
We seem to be pretty well covered in all areas of software for the Amiga except one, and that's for CAD, or more specifically, architectural design and drawing programs. As such, I was more than delighted to see your inclusion of the *Cycas* demo in *AF121*. As you so rightly pointed out, the Amiga-styled interface was a bit of a letdown, but that's something one could live with.

What I found so disappointing was the general awkwardness of the whole program and the rather poor content of the demo. I won't go into detail but suffice to say that I though it'd be worth around £30. Shock and horror when I saw that £100 was being asked for the full registered package, and that's without a printed manual. Where do these people get their prices from?

The PC and the Mac have some excellent commercial CAD programs at around a third of the cost. This raises the question of the Amiga's viability in any future serious software market.

John Read
Greece

Well, we did have X-CAD 2000 *and* 3000, *but since no-one wanted them the developer shut down.*



Cycas is a good CAD program, but it does have limitations. Let us know if you think other serious software on the Amiga is overpriced.

DRAWING A BLANK

I've had my Amiga for many years and have expanded it to meet the growing requirements over the years. I'm now in need of a structured drawing package. I came across a demo many years ago for Lazarus Engineering's *Design Works*. Is this software still available or is there a similar program as I seem to have drawn a blank?

Mr. B. Skinner
Norwich

Yes it's still available, although it's not very good. I think Epic Marketing may have a few copies of it. Draw Studio *is far better, although it's probably not being developed any longer because of the lack of response from users. We had a demo of it on our CD some time ago – go to* AFCD32 *and look in the +System+/tools drawer.*

A COUPLE OF POINTS

Just a couple of points. First, think carefully: if the new Amiga can emulate PCs and Macs so easily, what's to stop people just using them as a cheap alternative to a PC? People might not write Amiga-specific software if they can write PC software and sell to a much larger market. Secondly, I noticed that when *Sensible Soccer* was released on the PlayStation it was compared to more modern soccer games and given low ratings. I just hope you won't be as biased as this. Obviously a game, whether released 10 years ago, today, or in 10 years' time, is still the same game, and should get the same ratings whenever it was released.

For example, if *Rainbow Islands* was released today on some new console, it should still get the same ratings as it did all those years ago.

David Thomsen
New Zealand



Should classic games like *Rainbow Islands* be compared to state of the art modern games?

You're quite right. Solid PC emulation might be as much of a millstone as a boon, but as long as there are hundreds of millions of new Amiga users, do we really care that they're using MS products to start with? Surely they'll see the light when they start using really good Amiga software. On your other point, I can agree to a certain extent in that it's the gameplay that really counts, not the look of the game, but apparently Sensi's *still a bit of a dog on the PlayStation anyway.*

Likewise, if there was an updated Rainbow Islands *and it offered the same 2D platform action, it could be compared, except for the fact that people might feel a bit gipped if they only got about a meg's worth of game for 40 quid. The fact is that these days people really do expect nice intros and 3D graphics throughout the game, so comparing the two is somewhat unrealistic.*

Finally, this month's AFCD *features a cracking tune by Apex, created entirely on Amigas. Unfortunately, we lost your letter, so please write in again for the next issue! Meanwhile, have a listen – the song can be found on* AFCD40.

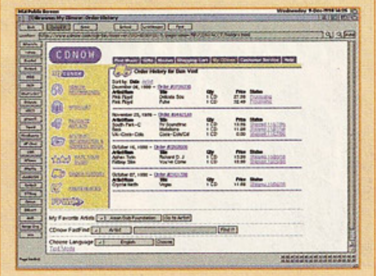
STOLEN MUSIC

I was unlucky enough to have my music collection stolen a few years ago and have been slowly rebuilding it ever since. I visited the Virgin and HMV megastores on Oxford Street this week trying to find some CDs and was disheartened to find that the ones I wanted are now deleted from their catalogues and are therefore unavailable. I then had an idea.

This artist is popular in the USA and *AF* ran a feature on online shopping recently. Hmm. A quick visit to CDNow and I've ordered everything I was after. Thanks for the article, Ben.

Oovis
via email

Hey, no problem. I'm sure you've found out by now that CDNow aren't just good for American artists either, and I still regularly buy quite a lot of my music from there.



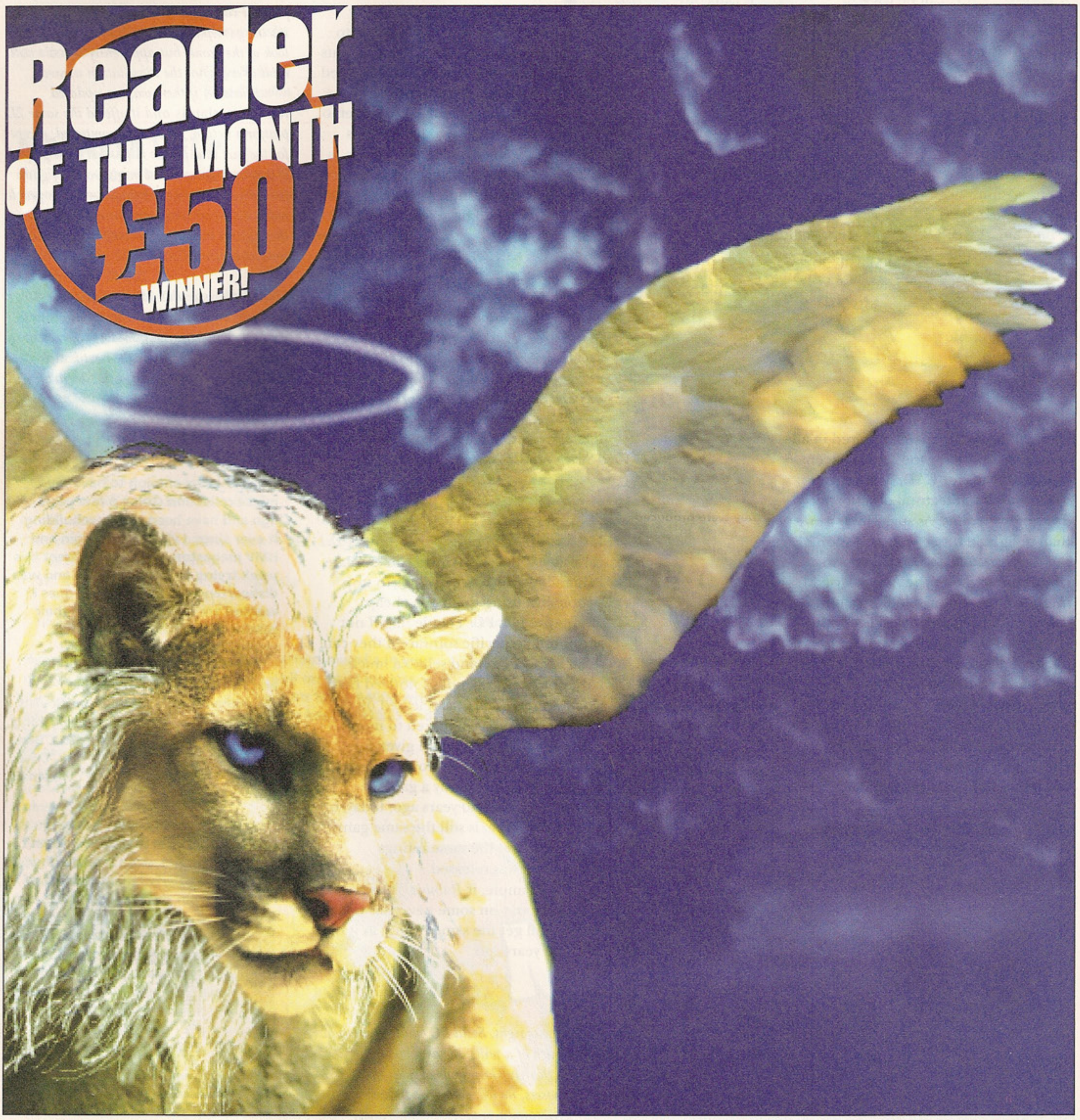
CDNow is just one of many superb online CD stores.

The Gallery

ON THIS MONTH'S CD

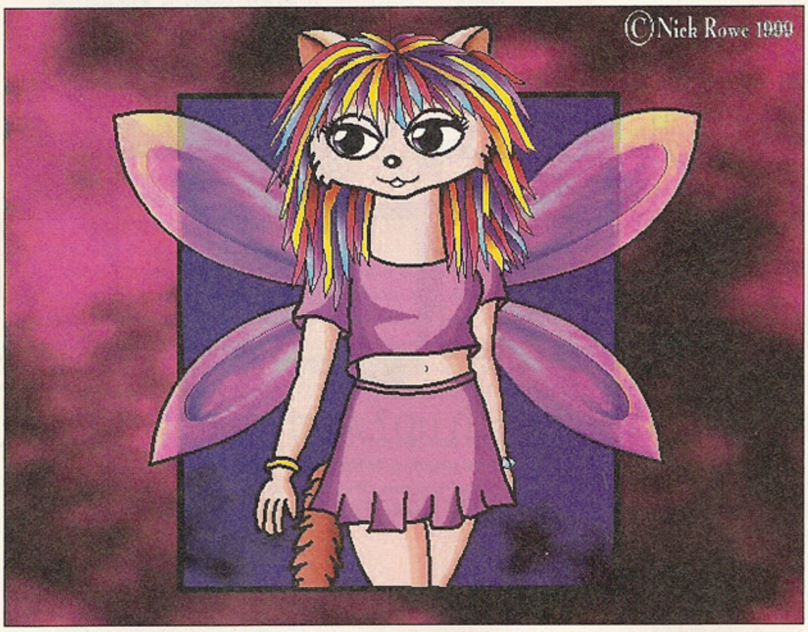
AFCD40:-ReaderStuff-/-Gallery-

Never mind the Pollocks – **Ben Vost** finds some very fine Amiga artwork indeed.



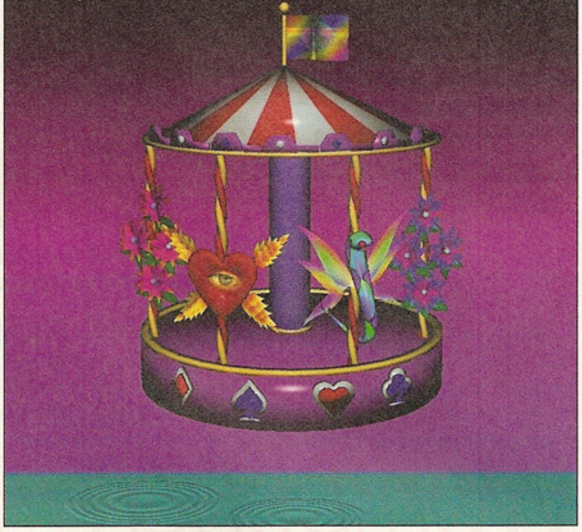
Angelion by John Cooper

John says that this image took him a single night to produce with the aid of lots of coffee and his A4000TX. He was inspired by a close friend of his who came up with the concept of the angelion, so he sat down and created it in *Art Effect 2.6*. This entry truly deserves the prize money this month.



Curiosities and Wings by Nick Rowe ©Nick Rowe 1999

Nick's hand-drawn, umm, 'thing' is very nice, and his render is suitably baroque – not a trace of a chequered floor or chrome surface, so well done!





Planewing by Mark Moran

Again, Mark doesn't send us a readme file to accompany his ragtag mix of pictures and animations, so we can't say what they were produced with, but his plane wing image does at least take a slightly different view of a plane than the ones we normally get in The Gallery.





Abstractc and Mother Nature 2 by Graham Chestney

Graham doesn't mention *TVPaint*, but the bubbles in Abstractc look remarkably like those produced by that great program. His Mother Nature 2 image seems to use the woman from the Newtek demo-reel 1, plus a *VistaPro* rendered image composited in *Photogenics* with some of its filters added.

CONTRIBUTIONS

If you'd like to enter your work for The Gallery in *Amiga Format*, read the Reader Submission file on the CD or simply send your work to this address: The Gallery, Amiga Format, 30 Monmouth Street, Bath, BA1 2BW. Please make sure you include the reader warrant from the CD pages in this mag.

Serious AMIGA FORMAT disk





Want to spice your Workbench up? Add more flexibility to your requestors? **Errol Madoo** presents *AF*'s indispensable collection of Workbench enhancements.

Workbench Add-ons

ARQ

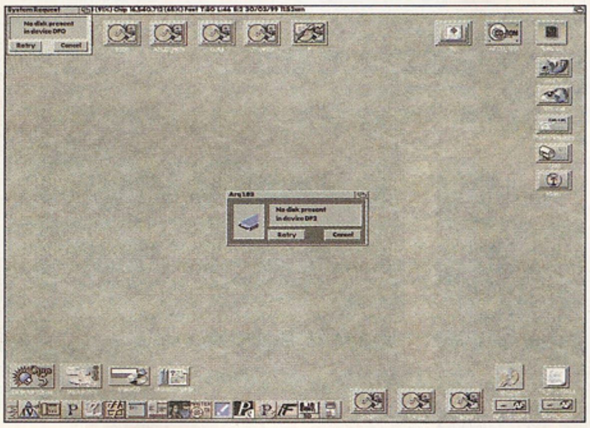
ARQ is perhaps more of a cosmetic improvement than an essential "can't live without" Workbench enhancement, but don't let this fool you – ARQ has loads of nifty little features that will soon become a much-used part of your Workbench sessions. *ARQ*'s main aim in life is to enhance the look and feel of your Workbench requestors. Once *ARQ* is running, which is simply a matter of copying the *ARQ* icon to your WBSTARTUP drawer and rebooting, Workbench's boring old requestors are replaced with the much improved ARQ requestors.

"Your requestor has now sprung to life and has an animated picture of a floppy drive with a disk sliding in..."

The first difference you'll notice is that requestors no longer pop up in the top left of your Workbench screen; they now pop up in the centre, which effectively makes them easier to get to. Then the big difference – your requestors are now animated! No longer do you have to look at a little window that simply states that you have no disk in df0:. Your requestor has now sprung to life and has an animated picture of a floppy drive with a disk sliding in and out of it.

Keyboard control of *ARQ* is easy and several keyboard shortcuts are available to make your life easy. For example, pressing the "ESC" key will cancel the current requestor which, you must agree, is much easier to use than the default Workbench Left-Amiga-B combination.

Should your requestors come up with more than two buttons to press, *ARQ* also allows you to use function keys to select buttons. Pressing F1 will activate the left hand button in the requestor, F2 will activate the button to the right of it and so on.



Which requestor do you prefer? Pressing "ESC" in the *ARQ* requestor cancels and "return" retries.

CYCLETOMENU

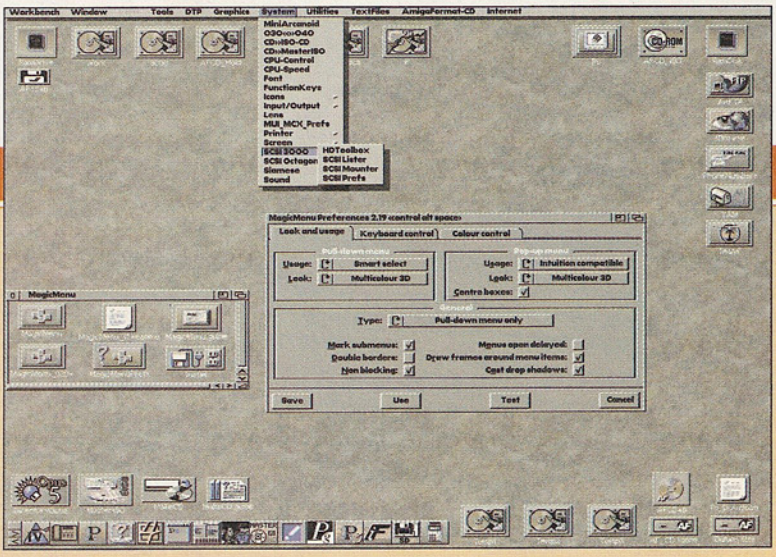
CycleToMenu is a simple commodity that turns the standard Workbench cycle gadgets into popup menus, making the selection of nested options much faster and more efficient. Now you no longer need to step one by one through seemingly endless options – just click on the first option and hey presto! A list with all the available options pops up ready for you to select your choice.

Installation is easy – just copy *CycleToMenu* to your WBStartup drawer or, if this is too hard for you, an installation script is also provided.

MAGICMENU

Bored with Workbench's black on white flat-looking menus? Sick of having to go right to the top of your Workbench to select a menu item? If you can answer yes to either of these, you should really give *MagicMenu* a test drive.

In its basic form, *MagicMenu* replaces the standard Workbench menus with much more flexible and better looking 3D menus. If the ability to have your menus pop-up anywhere on the screen with the simple click of a mouse button, and the ability select your menu's colour scheme, is something that appeals to you, *MagicMenu* is the answer.



MagicMenu at work. Look at those groovy grey menus complete with sexy drop shadows. The *MagicMenu* preferences allow you to tweak settings to your heart's content.

MULTICX2

We all have loads of stuff in our WBStartup drawer, don't we? One program to do this, another to do that, one to blank your screen and perhaps even another one to do something else. This is all very well but having so many programs running isn't very efficient, it slows your system down and probably wastes loads of your system's resources into the bargain. One possible solution to this problem would be to use *MultiCX*.

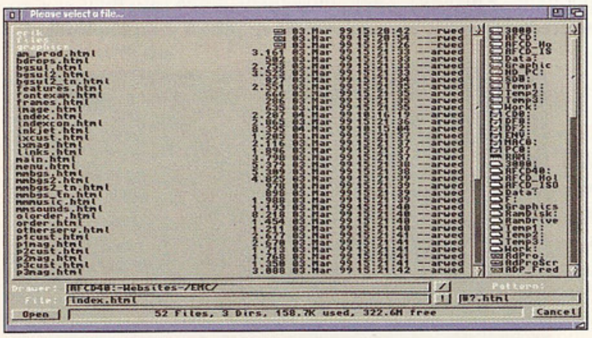
***MultiCX* can do this, that, blank your screen and lots of something elses! For starters, if I told you that *MultiCX* has screen blankers, could accelerate your mouse and cycle your screens, you'd probably be interested. Then if I told you that it could also automatically activate your last used window, control window movement and blank your mouse pointer, you'd be a little more interested.**

Finally, if I told you that it could close/zoom windows, flush your Amiga's memory and display a menu of all current public screens, allowing you to quickly jump to them, you should only want to do one thing – install it!

MAGIC FILE REQUESTER

Without realising it, you'll probably find that file requestors are probably the most used part of the Amiga operating system. Every time you load or save a file, up pops a file requestor. Go on, give it a try – load your favourite paint program, draw a few lines on the screen and then select "Save" from the file menu (sometimes called project menu) and see what happens. If everything has gone to plan, a file requestor should be staring you in the face. Now that you have the requestor open, save your picture file in RAM: and call it "fred.iff".

Now that Fred.iff is residing in RAM: draw a few more lines on the picture (or circles if you're feeling adventurous) and select "Save" again. When the requestor pops up, try saving your new picture as "fred.iff" again. Oops! It already exists, doesn't it? Let's say that you want to keep your original "fred.iff" picture. You could cancel the requestor and select "Save As" from the menu, but wouldn't it be easier to open a menu and select "File/Rename" to rename your original "fred.iff" to "fred_old.iff"" and then save your new picture as "fred.iff"?



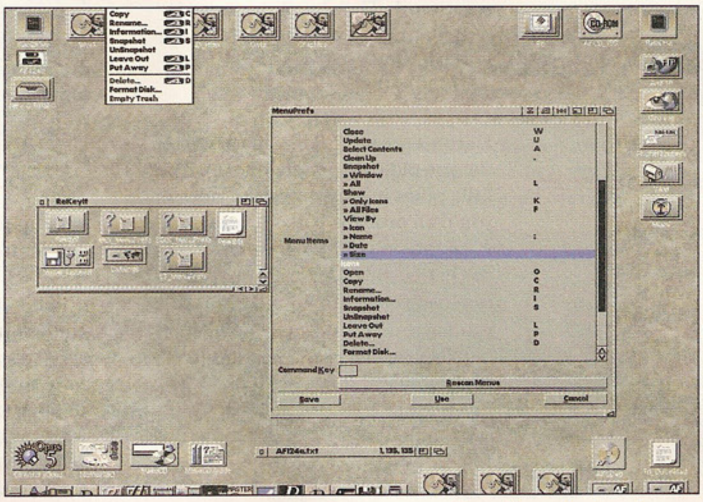
File requestors may be restricting and a little boring but not with *Magic File Requestor*.

If scanty menus appear when you have your file requestor open and you click your right mouse button, you're not using *Magic File Requester* (*MFR*), are you?

It doesn't stop there. As well as the ability to create new directories, *MFR* adds a whole host of other features to your file requestors, including such things as search for files, copy, rename, delete, sorting and so on. As if this wasn't enough, *MFR* also allows you to change the requestor's font and even customise the layout and position of the requestor. Let MFR pop up on a screen near you soon and you won't regret it.

REKEYIT

This is a simple utility that allows you to change the keyboard shortcuts for the items in your Workbench menus, even allowing you to add shortcuts to the items in your Workbench's "Tools" menu. If you ever wanted to format a floppy with a single keystroke, you can now. Set up couldn't be easier too – all you have to do is double click on the install icon, wait a few seconds and then run the new MenuPrefs icon in your prefs drawer.



Makes your life a whole lot easier by allowing yourself to add new keyboard shortcuts to your menus.

POWERSNAP

This is a really useful little utility, written by Nico Francis, perhaps more famous for his *Powerpacker* series of programs. It allows you to use the mouse to mark characters anywhere on the screen and paste them somewhere else; for example, into the CLI, text documents or even into string gadgets.

Let's say that you found *Powersnap* so useful that you decided to write Nico a letter to thank him. You find his address in the readme file but need to transfer it to the top of your *Wordworth* document. You could memorise it line by line and then type it in, or you could hit your left Amiga key, select the text block with your left mouse button, flick over to your *Wordworth* document, hit the Left Amiga key again and paste it into place with your right mouse button. I know which one makes more sense to me.

WBSTARTUP+V2.8

If you've ever had conflicts between programs that are run from your WBStartup drawer, you'll know what a hassle it can be to disable these programs one by one while trying to establish which ones are conflicting.

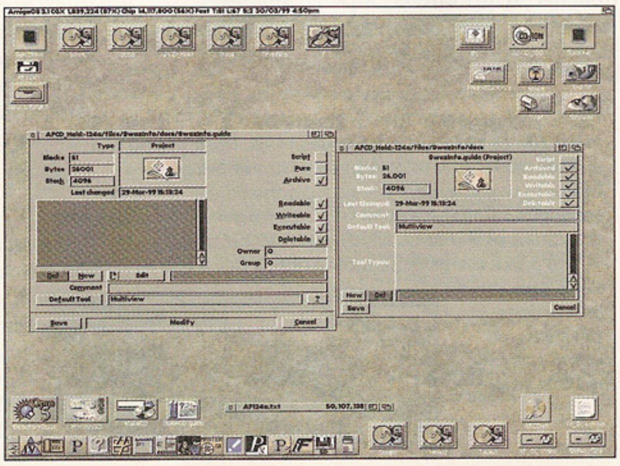
Once installed, *WBStartup+* creates two drawers within your WBStartup directory. WBStartup (Enabled) is where all the programs that you want to run are stored, while WBStartup (Disabled) is where all the programs that you don't want to run are stored.

The "disabled" drawer is also handy for storing the readme files associated with the startup programs. Anyway, apart from tidying up your WBStartup drawer, *WBStartup+* allows you to enable or disable individual programs via hotkeys, or, should you wish, disable all programs.

SWAZINFO

SwazInfo replaces Workbench's icon information window, the one that pops up when you single click on an icon and select "Information" from the Workbench "Icons" menu. The new *SwazInfo* window retains all the previous information and options but adds many improvements and new features. The best of these is the App window where you can simply drag and drop an icon from your Workbench to replace the icon image of the currently selected icon. It should be noted that *SwazInfo* doesn't work correctly with *NewIcons*.

If your system's icons need sorting, you couldn't go far wrong by giving *SwazInfo* a whirl.



SwazInfo (left) or not *SwazInfo* (right). *SwazInfo* adds lots of features to the Icon Information window.

Games disk AMIGA FORMAT





Bored with waiting for that file to copy or download? You need Errol Madoo's guide to the best multitasking Workbench games around.

Multitasking Games

Games with flashy multi-coloured graphics are all well and good but they aren't normally multitasking. What happens if your Amiga is busy doing something and you fancy a game of something while you're waiting? Here's *Amiga Format*'s indispensable step by step collection of multitasking Workbench games.

> The game is fairly easy to learn and offers enough of a challenge without being too hard and frustrating...

521

On first appearance *521* looks really easy, but after a few seconds you'll soon realise that it's a deceptively difficult game to play. On starting the game you're presented with the main menu where you can choose which level to play – at this stage I'd recommend that you swallow your pride and start with easy peasy. You're then presented with a 3x3 grid filled with numbers ranging from one to five. Clicking on a tile with the left mouse button will increment all tiles in that tile's row and column up by one. Any tile incremented past 5 will return to 1. The aim of the game is simple – all you need to do is fill the grid with 1's. Easy, eh?

DELUXE POKER

Here's a great Workbench version of the age-old card game of Poker. There's little point in explaining the rules since you'll all probably know already. *Deluxe Poker* follows all the standard rules so the better your hand the more you'll win. Get yourself a Royal Flush and you'll win fifty times your original stake!

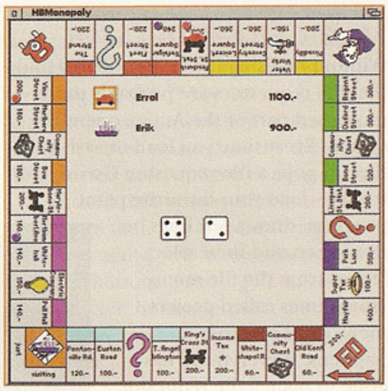
Deluxe Poker uses the *MUI* interface so if you haven't installed it yet and you like playing Poker, perhaps now is the time to do so.

HBMONOPOLY

Perhaps one of the most popular board games of all time, *Monopoly* springs to life on your Workbench. The aim of the game is simple – you just buy, rent or sell properties so profitably that you force your opponents into bankruptcy.

Starting from "Go", players move round the board in a clockwise direction, according to the throw of the dice. The object of owning property is to collect rent from opponents, which is greatly increased by the erection of houses and hotels. During the game's progression, players may land on Community Chest and Chance squares, where they collect a card and then follow that card's instructions.

HBMonopoly supports gameplay with up to eight players, it runs in one (and multiple) full-colour Workbench windows, has sound effects for most key events and even has a log file so you can easily resolve any player disputes.

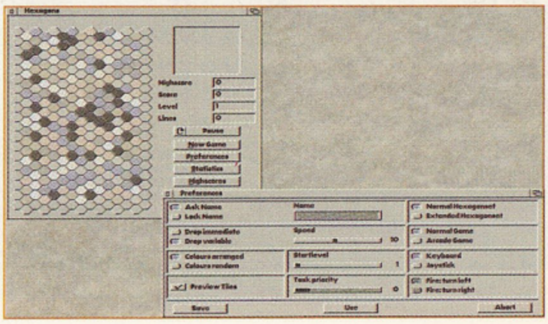


Hahaha! Erik has been sent to jail.

If you're a fan of Monopoly and have some friends with nothing better to do, you really should give this game a whirl. Perhaps the only downfall with *HBMonopoly* is that you can't cheat, so forget it if you're one of those despicable characters who "borrows" money from the bank when nobody is looking.

HEXAGONS

Hexagons is a variant of the classic *Tetris* game where you have to quickly place pieces into the best position to complete or fill the gaps in the bottom of your playing field. As the pieces are falling you have control of their left and right movement, along with their rotation. Once you've completely filled

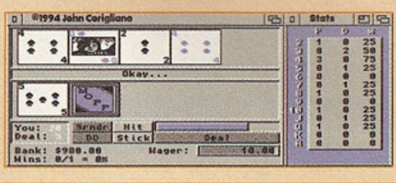


Hexagon and its preference window.

BLACKJACK2

This is an Amiga Workbench version of the card game *Blackjack*, or *Pontoon* to us English folk. Most of you will already know how to play but the aim of the game is basically to score more points than the dealer, without scoring more than 21 points. Points are gained by adding up the values of the cards which you're dealt.

To make things more interesting, a bet is placed on each hand. Full instructions can be found in the author's readme file.

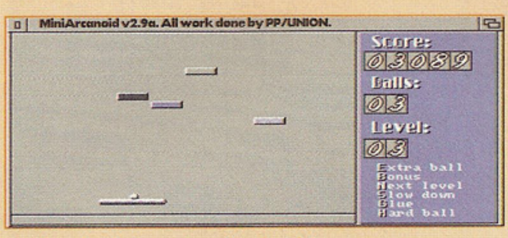


Ha! I beat the dealer.

MINIARCANOID

If you've never seen or played *Arcanoid*, you've probably just got a computer and have spent your life sleeping with your head out of the window. There have been countless clones and variations of this game and if you don't know why, stick your head back out the window. *Arcanoid* is quite simply one of the most addictive games ever devised. The aim is simple – just stop the ball from getting past you while trying to bounce the ball off your "bat" in order to destroy all the bricks above you.

As you destroy bricks, certain bonus letters drop down, giving you various features to make your life a little easier. If you manage to collect these letters, not forgetting to bounce the ball up the screen at the same time, you're awarded with such funky things as glue, slow downs and hardballs. If you have a few minutes spare, give *MiniArcanoid* a try, but be prepared to lose a few hours.



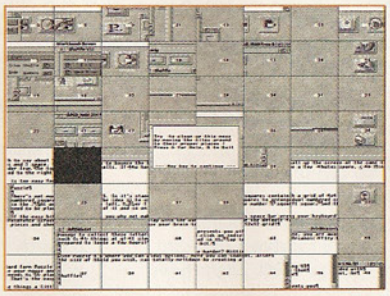
Just four bricks to go to get to level 4...

a line at the bottom of your playing field, the line will be automatically removed and the whole process starts again. The more lines you can get removed, the more points you gain. Sounds simple, doesn't it? If you're an experienced Tetris player you'll probably like this variation. If you're new to *Tetris*, this is one of the easiest routes to get the *Tetris* bug.

The game is controlled via the keyboard or a joystick. On the keyboard, the left cursor key moves the piece left, the right cursor key moves the piece right, the up cursor key rotates the piece clockwise and the down cursor key rotates the piece anti-clockwise. One nice feature of this version of *Tetris* is that it has many preference options where you can control such things as the speed of the game, the task priority and even the level that you want to start with.

SHUFFLE

Based loosely on the *Puzzle* theme, *Shuffle* is a small game that makes a copy of your Workbench screen, splits it up in a number of pieces, cuts out one piece and then shuffles the other pieces by moving them around. Your task is simple – just put the pieces in order again by moving them around.

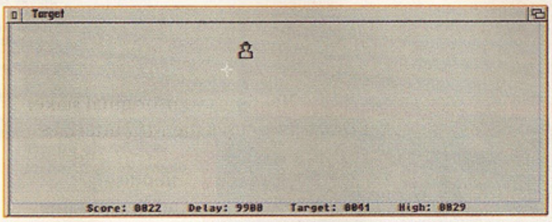


Messing up your WB is just a click away.

TARGET

If you're in need of sharpening your reflexes or need to give your left-mouse-button finger a good workout, *Target* could be your answer. On clicking on *Target*'s icon, a window opens up and little men (presumably baddies) start popping up, one at a time, all over the place. Your aim (no pun intended) is simple – shoot the little men. This sounds easy, but try it for yourself and see how good you really are. I set the delay to its longest and still had a hard time getting a decent score.

If you can beat this score then you're better than me!



WBRAIN

WBrain is a game in which you're given a randomly generated pattern which you must reproduce by choosing a correct order of moves. Moves are made by clicking on empty squares. The game is fairly easy to learn and offers enough of a challenge without being too hard and frustrating to complete.

WINTRIS_V1.21

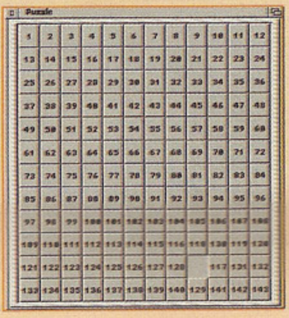
To round up the games disk this month, here's another *Tetris* variant with lots of neat features. It's great at multitasking so you can have a few games while you're backing up (you do backup on a regular basis, don't you?). It'll work on all Amigas using Workbench 2 or above, has its own preferences window and even has a saveable high score list.

PUZZLE

There's not much to say about *Puzzle*, really. In its standard form, *Puzzle* presents you with a grid of 4x4 squares containing 15 numbered squares and one space. The idea is to use your mouse and click on individual numbered squares to arrange them in the right order from the top left.

Number 1 needs to be placed in the top left square and the number 2 square need to be placed to the right of it and so on. That's the easy bit.

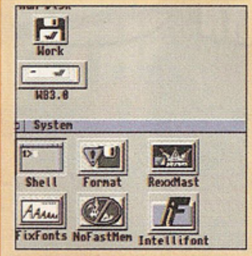
If the easy bit is too easy for you, why not make things a little harder? Hitting your keyboard's space bar presents you with *Puzzle*'s preference screen where you can play with the various options. Here you can change the default font, alter the size of the pieces and, should you wish, cause your brain to totally melt down by creating a 12x12 grid...



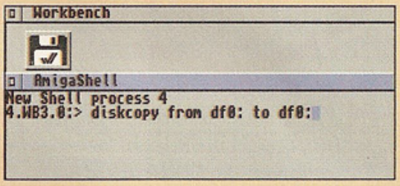
Sure, the standard game is easy, but this version certainly isn't.

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

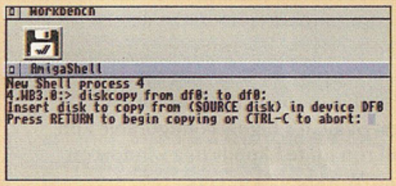


1 **Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.**

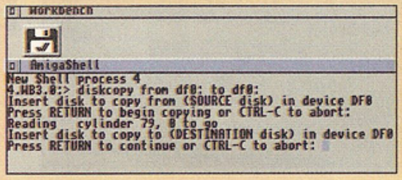


2 **Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:**

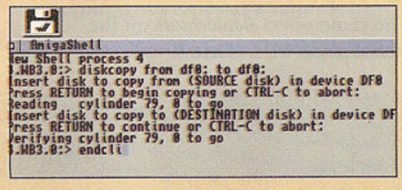
DISKCOPY FROM DF0: TO DF0:



3 **When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.**



4 **Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.**



5 **On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.**

DISK NOT WORKING?

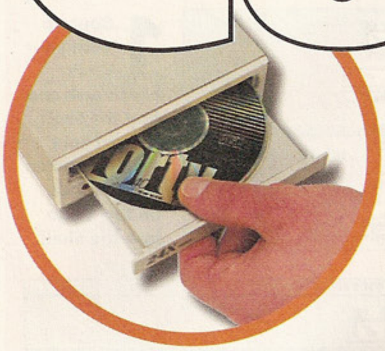
We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

***Amiga Format* (insert name of disk)**
TIB PLC • UNIT 5 • TRIANGLE
BUSINESS PARK • PENTREBACH •
MERTHYR TYDFIL • CF48 4YB

If there is a manufacturing error then the stamps will be returned with a replacement disk.

Cover disc





AMIGA FORMAT

Can you really believe that this is our fortieth cover disc? Time really does fly… **Richard Drummond** tours the latest.

WHAT'S NEW

AFCD40 includes even more improvements. If you click on the Ben_Speaks! icon this month we hope you'll receive a pleasant surprise. The HTML pages have been significantly redesigned and are now much more colourful. The digests of the afb mailing list have also been converted to HTML to make browsing them easier.

Other changes include the updating of *AFCDFind* and *AFCDPrefs* to show the difference between keyword and filename searches for *AFCDFind*, and to recognise PDF files.



The new bright and sunny pages on AFCD40, just in time for summer.

To tie in with this month's Games Disk theme, the ScreenPlay section on the CD is packed with dozens of OS-friendly games.

WBSTEROIDS 1.6

-Screenplay-/Shareware/WBSteroids

The is a stylish conversion of that old vector graphics coin-op classic, *Asteroids.* The gameplay has been updated and so have the visuals, featuring colour, resizable graphics and animation. But best of all, it's highly configurable and will run quite happily in a window on your Workbench screen.



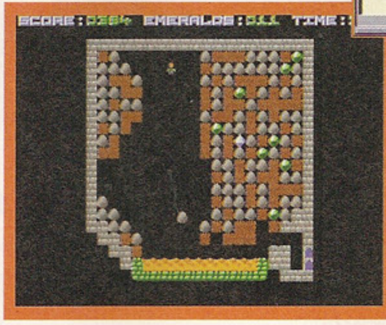
This is what games were like when I were a lad. 3D textured-mapped graphics? Bah!

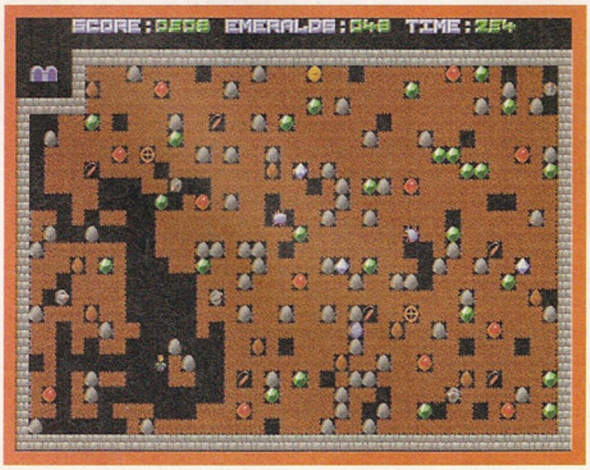
DIAMOND CAVES II V1.4

-Screenplay-/Shareware/DiamondCaves

Who remembers *Boulderdash* on the Commodore 64? It was a simple yet fiendishly addictive game which has often been copied but seldom bettered.

Diamond Caves by Peter Elzner is an up-to-date Amiga Shareware conversion with loads of new features. It multitasks happily and will run in the screenmode of your choice, even on RTG screens. The unregistered version of *Diamond Caves* features 50 levels and a *MUI*-based level editor.



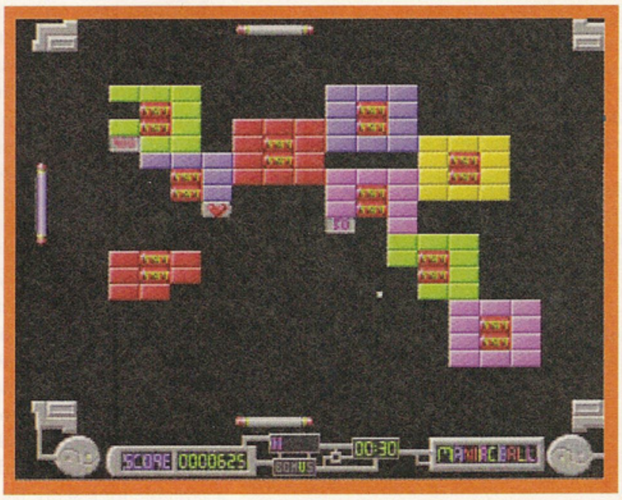


Yet more nostalgia with this *Boulderdash* spin-off.

MANIAC BALL V1.5

-Screenplay-/Shareware/ManiacBall

Maniac Ball is again a Shareware release from Peter Elzner. It's a twist on yet another old classic, this time *Breakout.* The novelty is that you get to control four bats, not just one. It also fully supports RTG screens and includes a level editor.



***Breakout*: possibly the most cloned game ever.**

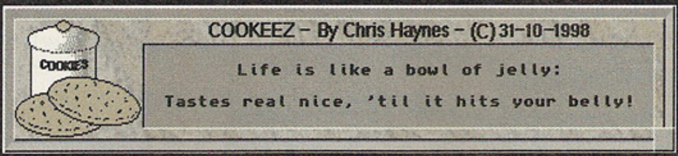
Your Stuff!

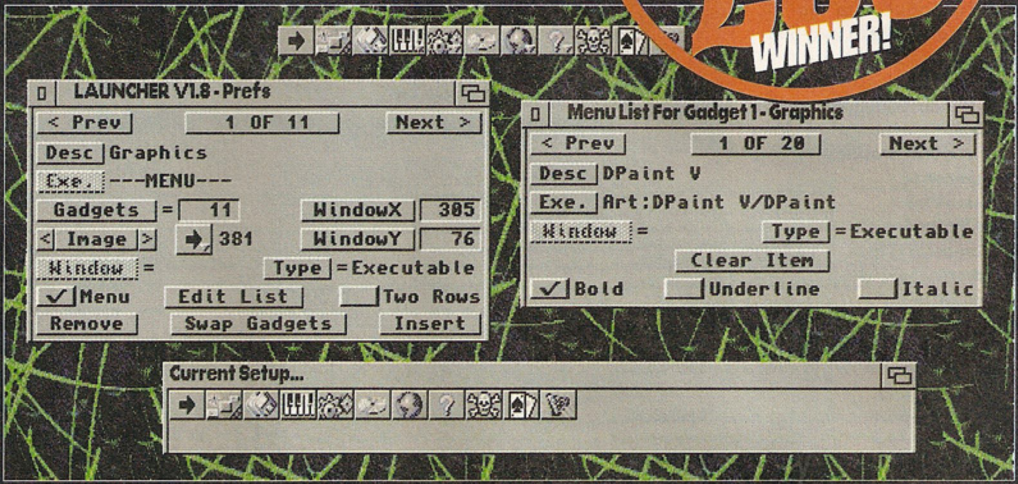
Reader of the Month £50 Winner!

The Reader Stuff section of the CD is far too light again this month. We've only been able to include less than 10Mb of your contributions and this simply isn't good enough!

Having said that, the winner this month for the best contribution is Chris Haynes. His entry, or indeed entries, lack something in originality but he nevertheless wins the prize for the solid execution of his ideas.

Launcher 1.8 **is a configurable button bank/menu tool for launching applications from the Workbench.** ***Cookies*** **is yet another widget for displaying fortunes at random, and last but not least,** ***WBColony*** **plays a nice Workbench puzzle game.**





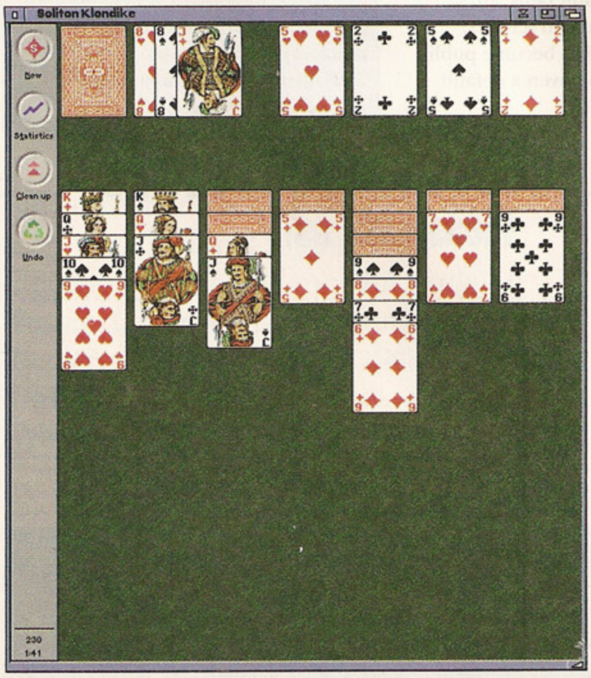
Launch your favourite apps and tools with a button and menu shortcut.

SOLITON 2.00

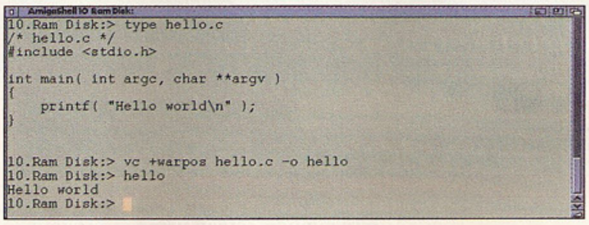
-Screenplay-/Shareware/Soliton

Kai Nickel's *Soliton* is perhaps the best-looking game of *Solitaire* you'll ever play. Or perhaps best-looking games, since it includes versions of *Klondike* (*Sevens* to us Brits) and *FreeCell*.

Both games employ *MUI* and the play area for each is realised with a specially written custom class; both feature customisable card sets and backgrounds, opaque card movements and many other options.



While away those lazy moments with a game of *Soliton*.



VBCC in action – shame about the rather dull example.

VBCC

-Seriously_Amiga-/Programming/C/vbcc

VBCC is a free, portable, retargetable ANSI *C* compiler. It will produce object code for a variety of processors, including the m68K, PPC and x86. There are three Amiga versions supplied – one to run on 68K machines, one to run under WarpOS and one for PowerUp. This new release features better optimisations, improved support libraries and the ability to generate either PowerUp or WarpOS executables.

THE BIG SQUEEZE

-Seriously_Amiga-/Archivers/xad
-Seriously_Amiga-/Archivers/xdms

The xadmaster.library is a shared library system which attempts to provide a common interface for the unpacking of the wide variety of different file and disk archive formats commonly in use. It's similar in concept to the *xpkmaster* system which functions only on data streams. Supported archive formats currently include *LZX*, *TAR*, and *DMS*.

The de facto standard for the compressing of Amiga floppy disks is *DMS* (the *Disk Masher*). Unfortunately, there have been no tools on other platforms for the handling of *DMS* archives, which is a real pain for *UAE* users, for example. Enter *XDMS*, a Freeware, portable tool for the unpacking of .dms files.

Amiga, Linux i386/ELF and MS-DOS binaries have been provided.

SCREEN CHAMELEON

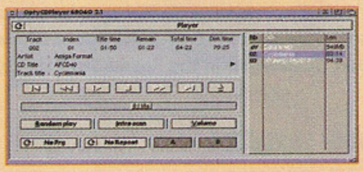
-Seriously_Amiga-/Shareware/WB/ModePro

ModePro is a powerful screenmode promotion and public screen manager utility. It lets you force all those user-unfriendly programs that open custom screens but don't allow you to configure the screenmode to open in the mode of your choice. It also permits you to define a list of public screens which your Amiga can then open and close as required. It's especially handy for

Continued overleaf ➡

AUDIO TRACKS

We have two Amiga-related sound tracks on ***AFCD40*** **for your aural delectation. The first, by Apex, is called** ***Cyclemania*** **and was produced wholly on Amigas. The second, from the soundtrack to the forthcoming game** ***FUBAR*****, is rather uninspiringly titled** ***Strategy Music 3*** **and is by Will Morton.**



This month's audio tracks, courtesy of *OptyCDPlayer*.

LINUXPPC

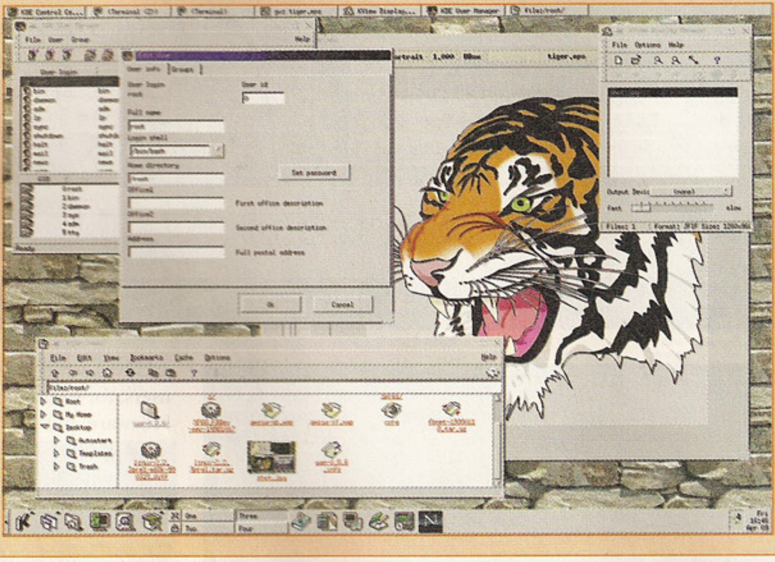
-In_the_Mag-/LinuxPPC

In response to the many requests received in the past, we've finally included *LinuxAPUS* on this month's coverdisc. This is for all of you who feel that their PowerUp cards aren't being exercised enough.

What we have here is the PowerUp *Linux* kernel and a partial distribution of the PPC port of *Redhat Linux 5.0*. The packages provided include the full base install, full *X Windows* install, *Netscape Communicator*, *Gimp* and *KDE Desktop Environment*.

In must be noted, however, that *LinuxAPUS* is still at an experimental stage of development. *Amiga Format* cannot offer any technical support on its installation or use.

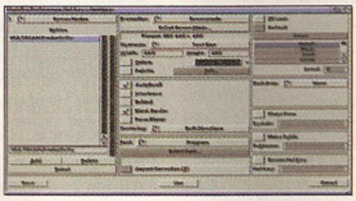




This is the *KDE* desktop under *X Windows* on *LinuxAPUS*. It doesn't remind you too much of Windows95, does it?

← convincing old software to run on an RTG screen, or for those of you who don't have a 15KHz-capable monitor.

Screens that are to be promoted can be matched on either screenmode, screen name or program name (of the opener). *ModePro* permits the coercion of nearly all aspects of OS screens. You may select the target screenmode, depth, palette, overscan type, system font, default pens, etc; hotkeys may be assigned to screens, custom screens forced to become public and any screen may be given a default backdrop pattern.



Whip those screens into shape with *ModePro*.

DISCLAIMER

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If your *AFCD* is defective, please return it to the address below. Please make sure you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the *AFCD* along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

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(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD42 – Amiga Format* issue 126, August.

Please tell us:

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24x CD-ROM Power Computing model in attractive finish, 240W self-contained external fan cooled A1200 power supply in nice white metal case. Offers. Sony DAT recorder, £350. ☎ 01745 887610.

Stereo speakers, subwoofer system with satellite speakers, 80W PMPO, £55. ☎ Kenny 01563 530482 (evenings).

A500+, 2Mb, one external floppy and CD-ORM. One HD input, Workbench 3.0, MIDI interface, games, software and emulators. ☎ Steve 0181 3107560.

Amiga 4000/'040, 18Mb revision 11 buster. Picasso II graphics card. Prelude 16-bit soundcard (new), Multisync monitor 1024x768, SCSI interface with 1Gb IBM fast SCSI hard disk, eight speed SCSI CD-ROM and more! £600 ono. ☎ 01159 128268.

Loads of games and utilities for sale from only £1 each. ☎ Dave 01228 598796, email Smithd@Free4all.co.uk.

A1500/2000 boxed, 120Mb HD, GVP controller card, Ethernet card, CD-ROM drive, NEC multisync monitor, Epson FX100+, printer, all leads and manuals included. £200 ono. ☎ 01706 228655 (Lancs).

Powerpoint B&W hand scanner, boxed with OCR software, plus Scanpad, £25 including P&P. Also Pagestream 2.2, boxed with manuals, £25 including P&P. Also many games. Call for details. ☎ 01692 598761.

A1200 Power Tower 50/'060MHz Blizzard Turbo board, 16Mb, FPU, 16x CD-ROM, 1084S monitor, RocKey, RocGen, tracker ball, joysticks, 200Mb hard drive, many games, FD cabinets, tutoring videos, £400. ☎ 0171 9670399.

A1200 and A600, one mouse, PSU, disks, £70 plus postage. CD32 FMV cart (very rare), offers. ☎ Tony 01159 194186 (Nottingham).

A1200T, 64Mb RAM BVision card, PPC 603+ 200MHz '040/25 6.4Gb hard disk IDE express plus 16x CD-ROM. Sell for £600 ono. ☎ 01753 889739.

8Mb 72-pin memory SIMM, d/sided, suitable for most accelerator/expansion boards, £10 plus postage. ☎Jonny 01762 832238 after 5pm.

A600, SCSI, CD-ROM drive, floppy and 500+ games and Workbench 2.05. Wordworth word processor package, only £95 ono. ☎ Alex 01562 639095.

WANTED

Does anyone have any of the following games for sale? Super Cars 2, Gods, Arcade Pool, Super Stardust CD. Will pay good money. Originals only please. ☎ Martin 0171 4952657.

Help! I've just lost disk 1 of Pagestream 3.0. Who can help me? Write/send to John vd Heuvel, Sjef Remmenlaan 1, 5706 DA, Helmond, Holland.

Hard drives, accelerators, 68030 or higher, 32Mb if possible. CD-ROM drive, SCSI, 2x faster, if possible with Squirrel. Also monitor and stereo would be nice. Anything for A1200 considered. ☎ 01504 841665.

BUY AND SELL HARDWARE & SOFTWARE... FOR FREE

The editor reserves the right to refuse or amend ads.
We accept no responsibility for typographical errors or losses arising from the use of this service.
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Name: ....

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❏ User Groups ❏ BBSes

Return to: Reader Ads • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW. You can email amformat@futurenet.co.uk, putting 'Reader Ads' in the subject line.

Unfortunately we cannot guarantee insertion in a particular issue.

I have read and understood the conditions for the inclusion of my ad

Signature: ....

Use one space for each word. Only the words in this section will be printed.

Free!

Campaign II and Pacific Islands or any decent tank simulator to buy or swap. ☎ Rich 01482 375428 (after 7pm).

Pirates. Must have map. Also Sentinel, both for A1200. ☎ Alan 0151 4206648 any time.

Lionheart by Thalion Software. Released in 1993. Will pay £10 for original boxed version, must be in excellent condition. Will pay postage. Also Turrican 1, 2 or 3. ☎ Robert 01738 813904 or 07887 665660.

Alien Breed 3D (2 or 1). Floppy version, must have manual, etc. ☎ 01902 441306. Ask for Mick.

OXYPatcher, full version. Also full version of Coarse Angler, to run on A1200. No demos please. Plus Sea Bass fishing and any Aminet CDs. Must be cheap. ☎ 01425 278401.

Dreamweb and Police Quest 2/3 in exchange for games of the same value. Must work on A1200 and be in good condition. SAE to Ross Whiteford, Cordon Mains, Abernethy, Perth, Scotland, PH2 9LN.

Accelerator, CD[32] with all necessary cables for A1200 wanted by pensioner still in learning process. ☎ Derek 01424 752806.

Supra Turbo 33 side port expansion for A500+. New keyboard membrane also wanted. ☎ 01773 768700.

Two games for A1200 – Morph AGA by Millennium, two disks, and Darkseed, seven disks. Must have background manual for codes. ☎ 01909 591461.

CD writer for use with Squirrel (SCSI). Have MasterISO and '040 (external unit required). Write speed unimportant. ☎ 01203 453521.

PERSONAL

Also see the AmigaAngels document on our CD.

Amiga contacts wanted to swap games. Will reply 100%. Contact Mr. Martin Emery, 3 Scott Ave St., Budeauy, Plymouth, Devon, PL5 1HQ.

Amiga music contacts wanted for swapping MODs and samples. Must be SoundStudio compatible. Contact Rob at 47 Gordon Road, Peckham, London, SE15 2AF. Will answer all letters.

Alphab eta gammede late 'psilonz' eta eta the eta ioam taka ppal day month uknow xiours ximins iclips ic aron tak allu up jammeis astone builders rejected barrasford park NE48.4BB.8.

English Amiga user in Paris wants to meet other users to talk and share ideas and maybe start a user group. Robert Sowden, 2 Rue Maria Deraismes, 95600, Eaubonne, France. 01342 79885.

BBSes

Send your BBS ads to the usual Reader Ads address. BBS ads will be printed for three issues.

Skull Monkey BBS, Lincoln. Online 6pm-8am, 24 hours at weekends. ☎ 01522 887933. Friendly sysop. Email sns@skullmonkey.freeserve.co.uk keeping the Amiga alive.

Elevate BBS, Hants, online 24 hours. ☎ 01329 319028.

Bedlam BBS, Leicester, online 24 hours. ☎ 01162 787773.

Entertainment BBS, Wigan, online 24 hours. ☎ 01942 221375.

The Forum! BBS online 24 hours, Kilmarnock, Scotland. Over 35 members, 2,000+ files available, including games, pics, utils, etc. Sysop: Jamie Maguire. Run by a software development student. ☎ 01563 540863. 36K.

Bill's BBS, Cumbria, online 24 hours (mail only between 2.30am and 3.30am), ☎ 01229 434393 or 0870 7878615. Sysop: Bill Clark. Visit http://cumbria.cjb.net, email billsbbs@cornerpub.com or bill.clark@ukonline.co.uk. Supports Fidonet. Loads of free files, games, doors, quizzes,etc. Unlimited downloads.

X Zone BBS, supporting the Amiga for over two years. Do you want the latest files? ☎ 01635 820590, 6pm-1am, modem callers only (33.6K). Call now.

Quest BBS, Wakefield. West Yorkshire's largest BBS with over 30,000 files online, including the latest 7 Aminet CD-ROMs. Online weekdays, 6pm-6am and weekends, 2pm-6am. ☎ 01924 250388.

On The Oche BBS, Waterlooville, online 24 hours. ☎ 01705 648791.

Moonlight BBS, Bedford, online 6pm-8am, 24 hours at weekends, ☎ 01234 212752. Sysop: John Marchant. Email gnome@enterprise.net. Official Transamiga Support BBS, unlimited downloads, very friendly sysop with excellent Amiga knowledge. Aminet online. Run by an experienced Amiga programmer who will help for free.

L's BBS, Kent, online 6pm-midnight. ☎ 01795 511103.

Amiga Nutter BBS, Herts, online 24 hours. ☎ 01707 395414.

Arachnoids BBS, Leicestershire, online 24 hours, ☎ 01509 551006.

Xanadu BBS, Wigan, online 24 hours. ☎ 01942 746342.

Zodiac BBS, Hants. Online 11am-7pm 7 days a week. ☎ 01243 373596. Sysop: Destiny Co. Sysop: Axl. Running Maxs Pro v2.11, Hellnet. Lots of files.

Echoes BBS, (Camberley). Line 1 ☎ 01276 502641, 56K, 24 hour. Line 2 ☎ 01276 502642, 33K, 24 hour. Sysop – Steve Barnett. http://surf.to/echoes.bbs Latest Aminet downloads, nine online CD-ROMs, Fidonet and other mail networks. Offline reading available and free email to all members. In fact, free everything – no subs of any kind as the BBS is run for the love of the Amiga and Xenolink software.

Black Magic BBS, ☎ 01788 551719 after 10pm, over 6,000 files online.

Frost Free BBS, ☎ 01484 327196 (Slaithewaite, W. Yorks).

USER GROUPS

User group ads will be printed for three issues.

Amiga users – do you need help? Amiga users – can you help? If so, contact Terry for more details. ☎ 01709 814296.

Medway and Maidstone Amiga collective. Meets monthly. Advice at all levels. Experts and beginners wanted. ☎ Dave 0961 809466. Support your local user groups!

Join a new email club for Klondike, a Reko Productions game. Cardset creators and cardset collectors, Amiga and PC. Email kevin@reko.karoo.co.uk (make friends).

Bournemouth: Dorset/Hampshire. Anyone interested? User group contacts. Amigan, one year, seeks new/old users for chat/helping each other. Email to start, can/will post later if not online. gctshe_m@mail bournemouthandpoole-cfe.ac.uk

New Amiga sound and demo association seeks input, contacts and support to form a user group based around the Amiga music and demo scene. Interested? ☎ Daev 01243 864596 or 0961 985925.

Interested in Internet Relay Chat? Why not visit #Amigazone on Dalnet? We are a friendly bunch and meet at 10pm every day. Visit: http://www.tsd-ltd.demon.co.uk

Is there anybody in the Northamptonshire area interested in starting up a new user group? Please contact me: ☎ 01536 724309 or email nsthomas@ukonline.co.uk

Greenford Computer Club. 180 Oldfield Lane South, Greenford, West London. Meets: Thursdays 7-10pm. Everyone welcome. Anything Amiga. ☎ Richard Chapman 0181 9988599 after 7pm weekdays, all day weekends, or email if97rrc@brunel.ac.uk

The Amiga free helpline needs helpers, especially with regard to video, music, radio, graphics cards, PPC and digital cameras. Also, anything else that you can think of. ☎ Terry 01709 814296.

Great Yarmouth user group. Anyone interested in joining this new group ☎ John 01493 722422.

For the latest Amiga news, reviews, articles and interviews, visit http://www.amiga1.demon.co.uk/aio

Any Amiga users in Birmingham wanting to set up a user group? Please ☎ Hitesh 0121 6056452.

Amiga free helpline needs helpers. Also, it needs to help other Amiga users. If you fit into either category, ☎ Terry on 01709 814296 for more info.

SEAL, South Essex Amiga Link. Meets twice monthly at Northlands Park Community Centre, Basildon, Essex. Offers help, advice, tutorials and presentations on popular software and hardware. Also scanning, printing, email and a 36 page A4 magazine. Contact Mick Sutton, 20 Roding Way, Wickford, Essex. ☎ 01268 761429 (6-9pm). Email seal@thunder.u-net.com or visit http://seal.amiga.tm.

Amiga User Groups

S.W.A.G.





Just some of the lovely lads and lasses of SWAG. They are more cheerful than this usually, honest. Andy Mills is third from the right with his arms folded.

Ben Vost shares a beer with some of the SWAGgers in Bristol and talks to president Andy Mills about how it got started.

AF's local user group is based in Bristol, kind of, and I try to attend as often as I can. Right now it's not really a technical user group, more a gathering of like-minded people in a pub near the monstrosity that is Cribbs Causeway shopping mall on the outskirts of Bristol. I spoke to the club's president, Andy Mills, about the whys and wherefores of his user group, and this is what he had to say:

> "There'll also be more technical meetings in the future that will cover software demos, hardware installation, etc..."

AF: How did SWAG get started?

SWAG: Originally, a chap called Steve Dark advertised for people interested in joining a user group based in the south west of England (SWAG, the South West Amiga Group), many moons ago. Sadly, he couldn't take it any further due to time restrictions and his job, so after a little discussion he passed on the names he'd gathered to me and I contacted those people at the end of December 1997. It went on from there.

AF: How much is it to join?

SWAG: It's currently free as 99.9% of members are on the Internet. This will change in the (near-ish) future as I can't afford to run the group from my own pocket when SWAG expands to cater more for Amiga owners who aren't on the Internet.

The expected membership fees are likely to be: full – £10, part – £5, free – er, free...

This will be per year. Full membership will include the SWAG newsletter. This is released quarterly at present, but it'll be bi-monthly when I can get more help with it, posted via snail mail, and any other newsletters that become available. There'll also be a club badge, free or reduced entrance to demonstrations, etc.

Exact details on what membership options will be available and what it includes have yet to be finalised.

AF: How often does it meet and where?

SWAG: We currently meet on the first Thursday of every month at 8:30pm in the Lamb and Flag (part of the Harvester chain of pubs), Cribbs Causeway (A4018, just off junction 17 of the M5), Bristol. It's opposite Harry Ramsden's. More detailed directions can be obtained from myself if required.

These meetings are informal and not all techy, or completely on about Amigas all of the time, so don't worry about bringing along your other half as we'll try and not to bore them. We also have members aged from 12 to 77, so don't let your age put you off.

There'll also be more technical meetings in the future that will cover software demos, hardware installation, tutorials and so on. These will be in addition to the monthly pub meeting.

AF: Any more details?

SWAG: At the time of writing, we have 35 members from Hereford to Cornwall, and even one from Scotland!

At present, there's only myself "running" SWAG, so things aren't progressing quite as well as I would like, or as they should, in my humble opinion, because I have to do this in what little spare time I have...

GET YOUR GROUP IN AF

If you have a user group and you're interested in being showered in glory by having us, or one of our team, visit, then make sure you let us know about yourselves. Although *Amiga Format* can't necessarily afford the time to visit every user group, our friends at AmigaSoc are UGN (User Group Network) representatives that you should be familiar with.

As time goes by, they will endeavour to visit most, if not all, of the user groups in the country and then write them up for *AF*. If you haven't contacted us or AmigaSoc about a visit yet, now's the time to do so. Visit AmigaSoc's website at http://uk.amigasoc.org and get your user group on their database. If you're interested in setting up a new user group, visit their website anyway and look for like-minded souls in your area through their Soul Hunter database.

AMIGA soc USER GROUPS

SWAG INFO

If you contacted Andy before and haven't heard from him for a long time, please contact him again if you're still interested as many contact details he had were misplaced when he moved house earlier this year.

☎ 01275 830703, 7pm to 10pm only please. ☎ Mobile: 0797 096 3881. The SWAG home page can be found at: http://www.wharne.u-net.com/swag/ or http://surf.to/swag/.

afb

Amiga Format's mailing list is getting more active all the time. Over 500 people are now on it. **Why aren't you?**

Should you want to have your say about important Amiga topics, like those quotes in the piracy feature in the last issue of *Amiga Format*, the way to do it is to get on the afb mailing list. The afb is chock-full of info and fun every day and has *Amiga Format* readers from all over the world involved. If you have a tricky technical problem or just want the latest details on the new Amiga or the current one, the afb is where you'll find what you need.

This month we've talked about all sorts of things, from piracy, the Millennium, digital cameras and our *AFCD* to the iMac, and although the list is quite busy, you can merely dip your toe in the water by reading messages on the web if you choose to do so.

In addition to the messages on the afb, it's also the place where you can answer polls set by us or other users of afb, find out the deadlines for the next issue of *Amiga Format* or for special upcoming events, and visit some of the links posted by Amiga users.

> "It's easy to join, free to use and will help to enrich your Amiga-using life, so what are you waiting for?"

In any case, it's a useful forum for discussion, which will help Amiga users stick together in adversity. The crowd on afb is friendly and at all experience and age levels so you won't be out of place, no matter how old or young you are, whether you don't know one end of an Amiga from the other, or whether or not you can recite the registers on every custom chip the Amiga holds.

It's easy to join, as you can see below, free to use and will help to enrich your Amiga-using life. If you're online, what are you waiting for?

GETTING ON AFB:

You can subscribe to the afb by going to the following website and signing up:
http://www.egroups.com/list/afb/

If you just want news on when the next issue of *Amiga Format* will be out, we offer that at:
http://www.egroups.com/list/afb-announce/

It's worth joining both lists since they each offer unique things and the announce list usually only has one email every four weeks.

Fax-Back



Here's a new service for *Amiga Format* readers. We're only starting it this issue, but we'll expand it as people wish – just let us know what you want to see here.

Whether it's tutorials, reviews or features from recent issues or older ones, we're ready to include what you want to see, so just get in touch and give us the details of what you want (feature name, issue number, page number) and we'll put it on the list. If you don't know these details, ask us anyway and we'll see what we can do.

> "Whether it's tutorials, reviews or features from recent issues or older ones, we're ready to include what you want…"

Remember that you'll need a combined phone/fax to take advantage of this service.

HOW TO GET IT:

1. Dial 0906 302 1437 and wait for a fax check.
2. Key in the three-digit code listed below for your chosen article.
3. Press Start/Send to receive your fax-back.
If you run into any difficulties, contact our fax-back helpline on 0870 120 1240 (helpline open Monday to Friday, 10am-5pm; calls from the UK are charged at local rate).

Fax-back calls cost 50p per minute at all times. The service takes between two and eight minutes per page, depending on the quality of the phone line, your fax machine's specifications and the number of photographs on a page. Introductory pages with illustrations only won't be included, only pages with text. UK premium rate numbers may not be accessible from overseas.

FEATURES BY FAX

		From:	Ref no:
PRODUCT REVIEWS:			
PowerMovie	(2 pages)	AF123	001
TurboPrint 7	(1 page)	AF123	002
Delfina 1200	(3 pages)	AF123	003
Apollo Accelerators	(3 pages)	AF123	004
Vulcanology	(1 page)	AF123	005
Zombie Massacre	(1 page)	AF123	006
FEATURES:			
Reader Survey	(2 pages)	AF123	051
Netscape Interview	(2 pages)	AF123	052

Next Month



Amiga Inc. in secret meetings all over the world, OS3.5 and OS5 news and more, coming your way in four weeks!

PLUS:

Possible reviews of:

Melody 1200, **BoXeR**, The Prophet, **75MHz '060 accelerator**, Topolino, **T-zer0**, and loads more, but don't hold your breath!

July Issue on sale Tuesday June 8th

The contents of future issues may be subject to change – no guarantee is implied or intended.

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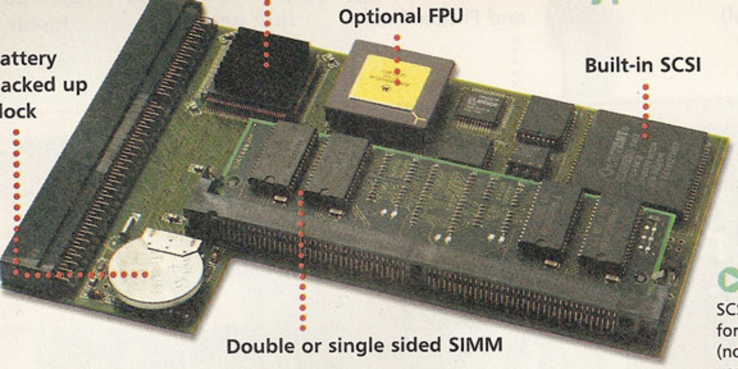
If you have a feature idea, a long term test, a reader request or you want to be in the Amiga Angels list, send an email to ben.vost@futurenet.co.uk, with "Features", "Reader Review", "Reader Request" or "Amiga Angels" in the subject line accordingly. If you don't have email, a letter to the *AF* address with the same subject headings is also fine.

If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

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14,644 July – December 1998



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Full 68030 40MHz with MMU, optional 40MHz PGA FPU, SCSI included (no need for SCSI adaptor), fit up to 64MB RAM (any double or single sided 72-pin SIMM), battery backed up clock, 50 pin SCSI connector on board including software and manuals (suitable for all our towers and A1200 desktop) £99.95

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4 x 4 x 20 CDRW ATAPI CD-Rewritable Ext. £329.95
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Box of 5 CDRW discs £39.95

(All the above external bundles include: case, cables. 4-way IDE interface with IDEfix 97 fully registered, MakeCD, 5 x CDR discs and 1 x CDRW Disc)

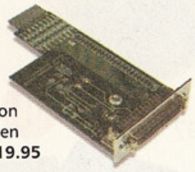
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SCSI adaptor for MK1 Typhoon (no need to open your Amiga) £19.95

a1200 accelerator boards

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Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, FPU 33MHz £69.95
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Apollo with full 68040 40MHz, up to 64MB £179.95
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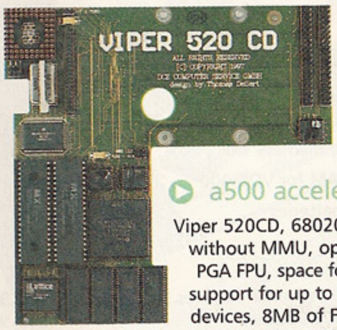
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32MB SIMM £55.95
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64MB SIMM (Typhoon and all Blizzards) £139.95
128MB SIMM (Typhoon and all Blizzards) £199.95
1MB ZIP RAM static column for A3000 £16.95
GVP custom 4MB RAM module £49.95
GVP custom 16MB RAM module £99.95
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33MHz PLCC FPU £15
40MHz PGA FPU £20
50MHz PGA FPU £29.95

A1200 3.1 computer, 2MB 68020, AGA chipset, Wordworth 4.5SE, Turbocalc 3.5, Data store 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organiser 1.1 Pinball Mania and Wizz games £179.95
As above with 160MB HD & Scala MM300 £219.95
As above with extra 8MB RAM £259.95

amazing hard drive deals

Plug and play hard drive. Includes cable and is already partitioned



hard drives

2.5" **810MB** IDE including IDE cable £69.95
2.5" **3.2GB** IDE including IDE cable £159.95
2.5" **4.1GB** IDE including IDE cable £195.95
2.5" **5.0GB** IDE including IDE cable £219.95
3.5" **3.2GB** IDE including IDE cable and install disk £99.95
3.5" **8.4GB** IDE including IDE cable and install disk £149.95
3.5" **13GB** IDE including IDE cable and install disk £199.95

(8.4 and 13GB HD are supported automatically by the PowerFlyer or by IDEfix 97 using the patch provided, an updated FileSystem is available on www.amiga.de Please note that cables included with 3.5"HD have standard 40pin headers. If you need to connect a 3.5 HD directly to the A1200 motherboard, you will need a special "stack" cable 44 high density (2.5") to 40 standard (3.5") IDE cable £12.95

squirrel interface

Squirrel interface - suitable for any scsi-device £39.95



new 250MB zip

iomega zip

Zip 100MB external SCSI including Amiga Zip tools, & cable (requires Squirrel or any SCSI interface) £139.9
Zip 100MB internal ATAPI including 4 way buffered int., EIDE 99 software, IDE cable and 1 cartridge £99.9
Zip 100MB internal ATAPI (bare unit only) £75.9
Zip cartridge (100MB) £12.9
NEW Zip 250MB External SCSI £189.9
NEW Zip cartridge (250MB) £19.9



floppy drives

A500/A600/A1200 Internal Drive £34.9
A2000 Internal Drive £39.9
PC880E External for all Amiga models £39.9
XL 1.76MB External for all Amiga models £65.9
XL 1.76MB Internal for A4000 £60.9



LS120 drive

LS120 120MB Internal ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1cartridge £89.9
LS120 120MB Internal ATAPI (bare unit only) £69.9
LS120 120MB External ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1 cartridge £139.9
LS120 cartridge £9.9

a1200 power tower

Power Tower Bare	£119.95
Power Tower 1 Power Tower plus A1200 motherboard, mouse, PC keyboard and FDD	£319.95
Power Tower 2 Power Tower, A1200 motherboard, mouse, PC keyboard, Typhoon 68030 40MHz, 8MB of RAM, 2.1GB Hard Disk, IDE buffered interface, EIDE 99 and FDD	£499.95
Power Tower 3 Power Tower, A1200 motherboard, mouse, PC keyboard, Typhoon 68030 40MHz, 24MB of RAM, 32x CD-ROM, 2.1GB Hard Disk, 4-Way IDE buffered interface, EIDE 99 and FDD	£579.95
Power Tower 4 Power Tower plus A1200 motherboard, mouse, PC keyboard, FDD, Typhoon 68030 40MHz, 40MHz FPU, 40MB of RAM, 32x IDE CD-ROM drive, Internal IDE Zip drive and 1 cartridge, 2.1GB Hard Disk, internal Scan Doubler inc. Flicker Fixer, 15" SVGA monitor, 4-Way IDE buffered interface inc. EIDE 99 and external audio port with speakers	£899.95

power tower accessories

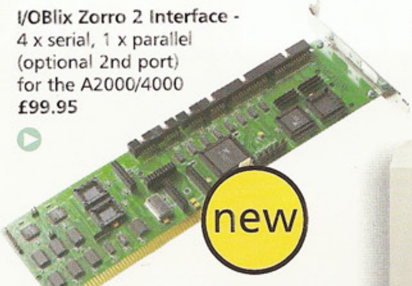
PCMCIA "V" adaptor	£19.95
External audio port	£15.95
"Y" cable to mix CD audio to the Amiga audio	£9.95
Internal to External SCSI adaptor (Internal 25 pin female connector, Internal 50 pin header External 25 pin male connector)	£19.95
SCSI II converter from(PPC) 50 pin high density to 25 D male, including extension cable to the Int/Ext SCSI adaptor	£29.95
SCSI converter from 50 pin female Centronic to 50 pin header (for internal connection of SCSI device to squirrel or similar interfaces)	£9.95
50 pin male to male Centronic lead	£14.95
50 pin female to male Centronic lead	£14.95
25 pin D female to 50 pin male Centronic lead	£14.95
3 way 50 pin header flat cable (SCSI)	£9.95
5 way 50 pin header flat cable (SCSI)	£14.95
7 way 50 pin header flat cable (SCSI)	£19.95
Ultra WIDE SCSI cable made on request	£POA
Standard 3 way IDE cable (3.5")	£4.95
44 high density IDE cable 5cm	£4.95
44 high density IDE cable 10cm	£7.95
44 high density IDE cable 80cm	£14.95
44 high density (2.5") to 40 standard (3.5") IDE cable	£12.95
Internal floppy extension cable (34 pins) for Towers	£4.95
Parallel Printer cable	£12.95
Serial Modem cable	£9.95
Internal to External male to female 9 pin D Extension lead for Surf Squirrel Serial Port or similar products	£4.95
200 Watt speakers	£35.95
80 Watt speakers	£19.95

4way buffered interface/EIDE'99 s/w

- Supports all IDE and ATAPI removable devices
- Autoboot from Zip and LS-120 drives
- 4 IDE/EIDE/ATAPI devices support
- 2 x 3.5" connector, 2 x 2.5" connector, separation and buffering of control signals for both ports
- Works with A600/1200 (kickstart 3.0)
- Up to 10% faster than IDEfix'97
- Buffered interface also works with IDEfix'97
- Support HDD 4GB (up to 32GB) by way of automatic HDD split into 4GB logical units, which guarantees 100% compatibility with the Operating System
- Allows large disks to operate with every filesystem OFS, FFS, AFS, PFS-2

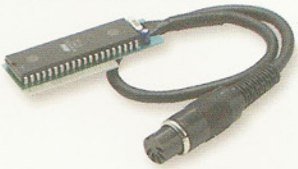
4way Buffered Int. & EIDE'99 s/w £24.95

I/OBlix Zorro 2 Interface -
4 x serial, 1 x parallel
(optional 2nd port)
for the A2000/4000
£99.95





Not universal



Universal PC/Amiga

keyboards & interfaces

A1200 desktop universal keyboard int.	£19.95
A1200 tower universal keyboard int.	£19.95
PC Keyboard interface only (A1200)	£19.95
Amiga Keyboard interface only (A1200)	£19.95
Original A4000 keyboard only*	£39.95
Original PC keyboard only*	£14.95

***requires keyboard interface**

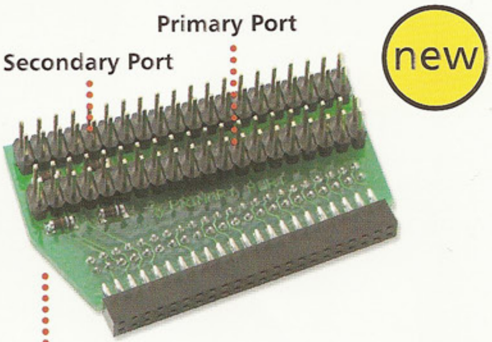
new amiga 1200 motherboards

A1200 motherboard without ROMs	£99.95
A1200 motherboard with ROMs	£125.95

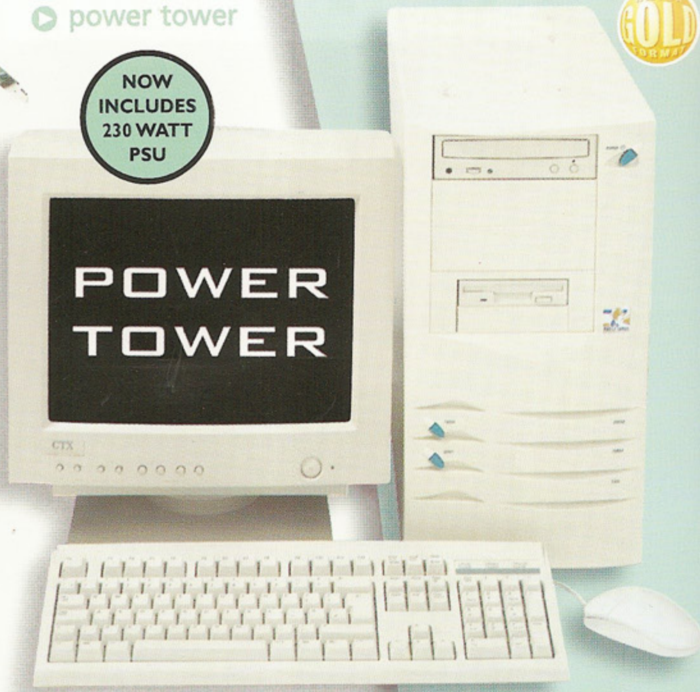
A replacement motherboard is usually the best long term solution if you have a damaged or unreliable A1200.

amiga 3.1 operating system

Amiga 3.1 OS for A1200/3000/4000 ROM chips, disks and manuals	£39.95
Amiga 3.1 OS for A500/600/2000 ROM chips, disks and manuals	£35.95
Amiga 3.1 OS disk set and manuals	£19.95
Amiga 3.1 OS A1200/3000/4000 chips only	£25.95
Amiga 3.1 OS A500/600/2000 chips only	£19.95



power tower



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